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THE
GREAT PHYSICIAN,
THE
CONNECTION OF DISEASES AND REMEDIES
WITH THE
TRUTHS OF REVELATION.

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TO HER

WHO

IN CONFIDENCE AND AFFECTION

HAS


ALONE ENCOURAGED THE PROGRESS OF THIS WORK,

IT IS NOW PRESENTED,

BY

HER AFFECTIONATE FRIEND AND HUSBAND,

THE AUTHOR.



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ENGAGED in the active duties of my profession, and in this literary attempt perfectly solitary, I can only conjecture how much it might have been benefited by the friendly suggestions of a more practised writer,—a species of co-operation most authors in the present day enjoy.

Nevertheless, under a deep conviction myself of the importance of my subject, I trust I have not altogether missed my aim of conveying somewhat of the same impression to my readers.

The present work is but part of a more comprehensive design, which, perhaps, had been better kept entire, but I am compelled to submit so much to the judgment of the Christian public, and to await that encouragement which shall enable me to proceed.

The general principles of the subject being embraced in this volume, it may be considered in itself complete. A synopsis of the remaining portion of the design alluded to is appended, which a single volume like the present would comprehend.

49, *Great Portland Street.*

Nov. 10, 1842.

P R O E M.

THE chief design of this work is the development of an idea, which, under a great variety of aspects, has long presented itself to my mind, amid my daily occupations, namely, that the phenomena and laws of diseases, and the powers and actions of remedies, have an intimate connection with the truths of revelation.

It is, however, one thing to have a vivid impression of truths, and another to be able to set them forth in order, so that they may be readily apprehended by those to whom they have never before been the subject of meditation or study. The method and scope of such an attempt seem to demand a preliminary consideration.

In the connection between that part of nature which is the province of medical science, and the theology of the Christian Scriptures, there is involved a profound *analogy*, from whence a new and powerful argument for the truth of the latter may

be derived. If to display this analogy constituted my whole design, there would have been little difficulty in imitating some of the many admirable models of analogical reasoning popular in English literature, or had I wished simply to deduce from medicine, as a branch of physics, such theological inferences as should harmonize it with the received natural theology, examples of the power, wisdom, and benevolence of God, in the creation and distribution of remedies, lie conspicuously upon the surface of the subject, and another Bridgewater Treatise might thus with great facility be constructed.

Whilst both these topics are embraced within the connection to be treated of, they by no means constitute its total. It is not merely in the resemblance of many features, neither is it in analogy, nor in certain coincidences in medicine with the facts revealed in the Scriptures concerning the Divine attributes and intention, that the connection consists. The infliction of diseases upon mankind, and the endowments of remedies, appear to be essentially *component parts* of God's moral and spiritual government. A complex apparatus, so to speak, in the natural world, to subserve the Divine purposes relative to spiritual and invisible things.

The phenomena and laws, therefore, of diseases and remedies, cannot be too minutely and comprehensively studied for the discovery of their subordination to this exalted purpose.

And yet it must be taken for granted, that one class of my readers can be but imperfectly acquainted with the science of medicine; and that another (the professional) has not given that prominent place to the study of revealed religion, which would make this connection at once evident.

This difficulty, at the threshold, I have endeavoured to overcome, by first attempting a brief outline of Divine truth, natural and revealed, and then a concise but sound and scientific introduction to the medical sciences. I hope to place the former set of truths forth in such a manner as to suggest their practical bearings, and promote the great cause of christian charity; and to make the latter constitute an exposition of the established truths and principles of medicine, apart from such hypotheses and discussions, as usually fill professional treatises, and repel all but professional readers,—such an excerpt as is generally very acceptable when but a limited acquaintance with any science is sought.

Should any one be disposed to object, *in limine*, to this mingling of medical science with Divine truth, let me invite him to read with candour the first chapter of this work, and whatever may be his opinion of my success in tracing it, he cannot fail to be convinced of the reality of the connection itself. To have executed my design in a manner commensurate with my feeling of its dignity, would have required co-operation, heart-ease, and it is no affectation of modesty to add, greater power, since

under more favouring circumstances I know I could have performed better, that, which no man without supernatural aid could accomplish perfectly.

The science of medicine, too, cannot be injured, it must rather be extended, by contemplating its truths in new aspects, and grouping them in various combinations. No branch of natural knowledge can derive equal advantages from a deep consideration of final causes, inasmuch as our Maker has, in the Holy Scriptures, according to the christian believer, imparted to us a knowledge of the designs and ends, both of man's creation, and destiny; and disease, being an inseparable accompaniment of his present life, must be an element in the working out of his designs. Thus this association of theology with medicine gives a new and unspeakable importance to every inquiry instituted for the purpose of adding to its accumulation of facts, and detaching all its errors; it encourages a search for remedies, and gives us confidence in their application, and it throws entire discredit on the opinion that would pronounce any disease incurable, by showing not only that diseases are imposed and controlled, but that the means for their alleviation and cure are supplied and directed by HIM who has condescended to assume the title of the Great Physician, whose power is unlimited, and benevolence and goodness infinite.

The plan of this treatise is as follows:—

The first chapter is confined to a general view of the subject, in order to show that the infliction of

diseases upon mankind, and the endowment of natural bodies with power to act as remedies, are component parts of the moral government of God.

I have next, in the second chapter, deemed it necessary to set forth, briefly, the principles upon which the evidences for the truth of revelation rest, the faculties by which its objects are apprehended, and to claim for my profession the privilege of aiding the diffusion of spiritual truth.

In the notes will be found several interesting examples of services rendered to theology by physicians.

The third chapter contains a summary of the doctrines revealed in the Scriptures, to form the standard for the subsequent comparison, as the facts of nature, more especially of medicine, are successively detailed. Imperfect as this part of my work must necessarily be, my views will, I trust, be found to accord with the recorded opinions of the most pious and learned of the great Protestant writers, who have contended for the supremacy of the word of God in the Holy Scriptures as the Rule of Faith, and who have rejected the claims of the Church of Rome to interpret for all men, and to add oral tradition, or men's fancies under that title, to the truths necessary to salvation.

Deeply interested as I am in the great controversy now agitating the church, had I any power, I would rather desire to divert men's minds therefrom than to add to the strife. Yet, as I necessarily state a

brief substantive body of doctrine, and it must of course take *one* side, I have studied to give it a shape as little controversial as possible. If I have unwittingly here fallen into error, I desire to be corrected. "I have set down my opinions in accordance with my judgment at this time, not as an immutable law to bind my advancing experience at all times." The long quotations introduced need no apology; the reader already acquainted with the authors whence they are derived, will feel new pleasure in meeting them here—should they introduce any one for the first time to their writings, he will incur a debt of gratitude to me. In the course of the work I have not scrupled to adopt sentiments and even phrases supplied by memory from any quarter, which would aptly apply to a passing topic; such quotations are generally marked and referred to their source.

Proceeding with my plan, I have in the fourth chapter discussed the manner in which nature is to be studied for truths concerning its Great Author, and the relation he bears to his intelligent creatures,—the principles and sanctions of Natural Theology.

It may be questioned whether Christians generally are alive to the great duty incumbent upon them of studying nature, or aware of the extent to which, according to the revealed word of God, it is intended to be made subservient to the truth. To say that the God of nature and the Author of

revelation is the *same*, may be a very inoperative truism. Do we really regard nature with the heartfelt conviction that its truths are the thoughts of the God we worship? If so, “how precious ought they to be to us, and how anxiously sought after, will they be by all that have pleasure in Him.” Such is the sentiment of one whose own knowledge of nature was more profound and extensive than can be easily imagined, and who did not rest satisfied with vague and general views of things. “The wisdom of God,” says an excellent physician, “receives small honour from those vulgar heads that rudely stare about, and with a rude rusticity admire his works; those highly magnify him whose judicious inquiry into his acts, and deliberate research into his creatures, return the duty of a devout and learned admiration.”

The manner in which the truths of nature are used by the sacred writers in illustration of their high and holy theme, furnishes us with all that is needed to guide our own practice, and therefore a few instances are adduced.

The fifth chapter treats of the converse of the former, namely, the employment of the truths of revelation for the elucidation of nature.

The sixth is upon the connection of the preceding discussions with the proper subject of the work—“The Great Physician.”

Having thus laid a foundation of principles upon which the superstructure of Natural Theology, and

especially that branch of it belonging to Medicine, may be based and erected,—I proceed in the seventh chapter to discuss the doctrine of an Interposing Providence, to inquire what truths may be derived from Nature and Revelation studied consentaneously respecting the *time* and *manner* in which the interference of the Deity is manifested in the physical phenomena and laws of Nature and in human affairs; and I endeavour to discriminate between superstition and true induction from facts. This leads to the detail of certain doctrines of Geology, and further introduces the history of Medicine, wherein are disclosed events curiously analogous to recent geological discoveries.

If the account of Mesmerism given in a note is more extended than its intrinsic importance deserves, it is because it serves to illustrate many principles adopted in the chapter.

The eighth chapter, “A brief history of epidemic diseases or pestilences,” opens up, in illustration of the doctrine of Providence, some of the most curious and interesting facts in the history of mankind,—truths which have been too little regarded, but which are worthy of a full investigation. In periods of alarm from the visitation of pestilences, the press teems with tracts and treatises; but no consecutive account of any value has of late been published. Noah Webster, an American, published, in 1799, a history of epidemics in two volumes, which may serve as a useful chronology, but it re-

quires, even as a chronology, to be corrected by reference to original authorities, and in other respects it is seriously defective and otherwise objectionable. This appears a promising field for the discovery of general truths of great importance to mankind. My sketch is only intended to serve an especial purpose, yet I trust it will be interesting to the medical as well as to the general reader.

In the opening of the second part of this work, it is intended to present the reader with an intelligible epitome of the structure and functions of the human body.

There are few persons so incurious as not to inquire into the principles of construction and operations of the steam-engine,—that wonderful machine which bears so conspicuous a part in the transactions of the present age. But the human body is immeasurably more wonderful than a steam-engine,—most elaborate mechanisms and contrivances are used in its fabrication, it subserves such numerous and diverse offices, it performs such multiform actions, that, regarded only as a machine, it presents to those thoroughly acquainted with it, a work worthy of the hand of Him who possesses all the treasures of wisdom and knowledge. The Christian believes further, that it is the instrument and abode of an immortal spirit, with which it is so intimately linked, as to share in, and to modify all its affections—to participate in all its enjoyments and sufferings, and that it is destined, with the in-

tervention of a temporary separation, to be purified from all its imperfections, and to partake of its immortality.

It is generally held to be necessary to have a very complete knowledge of anatomy, physiology, and chemistry, in order to practise medicine successfully; but a slight acquaintance with these subjects, a few leading facts, are all that are essential to the understanding so much of diseases and remedies, as appears desirable for the completion of a liberal education, or for the needful instruction of a christian scholar in these subjects, to enable him to understand their relations to moral and spiritual things. In attempting to comprise these in the limits of a single chapter, advantage must be taken of the most advanced science, and general principles of course can alone be included; yet, I confidently hope to be able to impart some valuable and instructive matter in a form readily understood by any attentive reader.

It would be no mean achievement could I succeed in my secondary purpose of diffusing a taste for a sound and solid knowledge of medicine among general scholars and the public. Although I utterly repudiate the constant reference to utility as defined by a certain school, to the exclusion of the good, the beautiful, and the imaginative, yet I must say that this subject is not surpassed in *usefulness* by any part of human knowledge. Every general truth concerning diseases and remedies

extended beyond the limits of the profession, would certainly become the means of mitigating suffering, and not seldom of saving life : and a large body of such truths widely diffused would favourably re-act on the profession, and raise the standard of acquirements necessary to the practice of physic. It would discourage ignorance and indolence, by enabling men to discriminate between mere pretension and true merit, and it would effectually prevent the intermeddling of the ignorant and the presumptuous, by showing the depth of judgment, and accuracy of information, necessary to the proper treatment of diseases. And as every man is necessarily, more or less, at some period of his life, personally acquainted with disease, it appears inexcusable to permit mere negligence or fastidiousness to interfere with his obtaining some acquaintance with its appearances, nature, and tendencies. The application of remedies too, to the full extent of their power, can far more readily be effected for those who have some just notions of their usefulness and limits, than for others who are apt to frustrate the best intentions of their physician by indiscreet interference or impatience.

If a sound knowledge of medicine served to secure its possessors from the influence of such demeaning delusions as Mesmerism, such dangerous absurdities as Homœopathy, and Cold-water Cures, and from such impostors as now and ever flourish in this metropolis, it would claim the serious atten-

tion of every sensible man. Upon the Christian the additional motive may be urged, that the study of medicine opens up to us a portion of the ways of God, and the manner of his dealing with men in furtherance of deep designs of wisdom and benevolence, and displays a scheme in natural things, in profound harmony with the Gospel.

But it may be said that professional men who must be deeply acquainted with medicine deceive and are deceived like others. True; and this affords the most powerful argument for the association I have attempted to accomplish in this treatise, between the study of this part of nature and divine truth, for there can be no doubt that the man who lives in the exercise of faith, who is a follower of the Great Physician, will be, in a great measure, preserved from falling himself into any fatal or serious errors, and will be totally incapable of employing any deceit to delude others.

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THE GREAT PHYSICIAN.

CHAPTER I.

THE SUBJECT STATED GENERALLY.

THE INFLECTION OF DISEASES AND THE ENDOWMENT OF
NATURAL BODIES WITH POWER TO ACT AS REMEDIES,
COMPONENT PARTS OF THE MORAL AND SPIRITUAL GO-
VERNMENT OF GOD.

ARGUMENT.—The Great Physician, a most interesting character of Christ—Death and disease imposed penalties for sin—Announcement of the Healer—Punitive character of disease under the Jewish dispensation—Its conversion into a remedial appliance for moral evil—Uses of healing in the ministry of our Lord—Exceptions to general principles—Mystery in the necessity for suffering—Uses and permanency of physical suffering under the gospel—Real evil of pain and bodily suffering—Example of our Lord—Limitation of bodily suffering, and remedies provided in nature—Suitableness of these great subjects for meditation and study—Result to be hoped for from the contemplation of Christ as the healer of diseases.

AMID the various aspects subordinate to the supreme and primary character of the REDEEMER, in

which Jesus Christ is presented to our contemplation in the records of his life and character, there is none so interesting to *me* as that of the healer of diseases—the GREAT PHYSICIAN. To those whose business is instruction, the character of Teacher, which he pre-eminently sustained, . . . to rulers, magistrates, and governors, the character of Lord and Master, . . . to the spiritual guides of the people that of Shepherd,—most apt and beautiful illustrations of his true nature and attributes,—may severally appear more striking, instructive, and appropriate. But to one whose mind has been filled and hands occupied during his whole life with diseases, watching their phenomena, studying their nature, and applying the abundant resources furnished to him for their cure or alleviation, and possessing, moreover, a strong bias toward the investigation of final causes, the ends and designs of the many processes and acts of natural bodies,—to such an one, every passage of revelation relating to the character of God as THE HEALER, comes home to the heart with a fulness of meaning, an accurate appropriateness to our condition, a touching relationship to our nature and necessities, which surpasses every other representation of his character and proceedings toward his dependent, sentient creatures. This is not a mere prejudice of profession. The first effect of man's departure from holiness, by transgressing against the command of his Maker, was, to bring his body into a condition of DISEASE. The inspired history

of that event and its result, deserves a close and minute attention. The divine injunction delivered to the newly-formed and perfect creature “of the tree of knowledge of good and evil, Thou shalt not eat,”¹ was manifestly probationary, deriving its obligation from the will of the Creator alone; the penalty threatened upon its infringement was, “In the day that thou eatest thereof thou shalt surely die,” or, as the original language of revelation more literally expresses the intention of the Creator, “Dying thou shalt die.” What was the meaning of this denunciation? The day in which man sinned he became a suffering, dying creature.

More than this physical change was unquestionably implied in the curse. Man immediately upon his transgression suffered death spiritually, not only in the loss of holiness, in the separation of his soul, the alienation of his heart from his Maker, but he was forsaken of God,—the life-giving spirit was withdrawn from him, and he thus suffered the death of sin. “When the man in insane fear,” says St. Augustin, “had gone and hid himself, God said to him, Adam, where art thou?—not ignorantly seeking him, but watchfully warning him to look well where he was, seeing God was not with him.” This was the primary death intended by the curse. But there was a further meaning in it more literally conveyed in the announcement which succeeded the commission of the offence.² “Dust thou art, and to

¹ Gen. ii. 17.

² Gen. iii. 19.

dust thou shalt return.” This is that natural death, and dissolution of our bodily organization, of which disease and suffering are the antecedents, the warnings, the signs, the means, and the causes. “Death hath passed upon all men, for that all have sinned.” This association of sin and death, it is important to remark, universal and indissoluble as their union appears, exists by virtue of no necessary and immutable law, but is resolvable into the will and absolute sovereignty of God, who established the penal character of death as the wages of sin. But there was more implied in the denunciation, “Dying thou shalt die,” than spiritual death and the dissolution of our nature.

“Man did not die as death is taken for a separation of soul and body, that is not death properly, but the ending of the last act of death. But whereas to man was intended a life long and happy, without sickness, sorrow, or infelicity, and this life should be lived here or in a better place, and the passage from one to the other should have been easy, safe, and pleasant; now that man sinned he fell from that state to a contrary. If Adam had stood, he should not always have lived in this world, for this world was not a place capable of giving a dwelling to all those myriads of men and women which should have been born in all the generations of infinite and eternal ages; for so it must have been if man had not died at all, nor yet have been removed hence at all. The death, therefore, which

God threatened to Adam, and which passed upon his posterity, is not the going out of this world, but the *manner of going*. If he had staid in innocence, he should have gone from hence placidly and fairly, without vexatious and afflictive circumstances; he should not have died by sickness, misfortune, defect, or unwillingness; but when he fell, then he began to die, *the same day*, so said God, and that must needs be true; and therefore it must mean that upon that very day he fell into an evil and dangerous condition, a state of change and affliction. Then death began, that is, the man began to die by a natural diminution and aptness to disease and misery. His first state was, and should have been, (so long as it lasted,) a happy duration; his second was a daily and miserable change, and this was the dying properly. This appears in the great instance of *damnation*, which in the style of scripture is called *eternal death*, not because it kills or ends the duration, (it has not so much good in it,) but because it is a spiritual infelicity. Change, or separation of soul and body, is but accidental to death; death may be with or without either: but the formality, the curse, and the sting of death, that is, misery, sorrow, fear, diminution, defect, anguish, dishonour, and *whatsoever is miserable and afflictive in nature*, that is death. Death is not an action, but a whole state and condition, and this was brought in upon us by the offence of one man.”³

³ Bishop Jeremy Taylor.

The germ of moral evil being once implanted in our first parents, by the act of disobedience it was rapidly and fearfully developed in the sins of their offspring ; and this development was closely attended by its punishment in an increased and increasing power of disease over the body, and a gradual abridgment in the duration of man's mortal and probationary term of existence. The increase of wickedness and the increase of physical diseases have ever been perfectly coincident. Not, perhaps, that this coincidence can ever be traced in particular instances in the ordinary proceedings of Providence, and apart from miraculous interpositions, but it is manifest in the great history of mankind. The universal reign of sin and the co-extensive prevalence of disease, as the inseparable concomitant, the initiatory action of death, sufficiently evince that the latter is the appointed and the appropriated instrument in the hand of God to accomplish his purpose of vengeance upon the transgressors of his holy law and commandments. Out of the abyss into which man had fallen he could not have been redeemed but by the interposition of his Almighty Maker ; and as the whole scheme of revelation was to be subservient to a remedial principle for both forms of evil, physical and spiritual ; consentaneous with the offer of a conditional pardon of sin, God presents himself to us in the character of THE HEALER, throughout the whole process of redemption.

When the time, the set time, was come for the

establishing of the covenant which God proposed to make with a peculiar people, separated from the nations, to be the depositaries of his laws and ordinances for the time being, introductory to the Gospel, it was by a series of visible representations, historical events and acts,—not, however, without suitable commentaries and explanations accompanying them,—that the spiritual things, the principles and designs of God's moral government were set forth and presented, first to that people, and afterwards through their annals to all succeeding ages.

Those great events, the deliverance from Egypt and the institution of the passover, typified man's great deliverance from the power of evil, and the acceptance of the propitiatory sacrifice of the Lamb of God for the sins of the world. And now, immediately after, whilst the remembrance of the judgments and plagues inflicted upon the Egyptians for their disobedience to the commands of God,—an unprecedented prevalence and association of sin and disease,—was still vivid, the bitterness of the water of Marah, and the miraculous change wrought in it, symbolized the abhorrent nature of sin to a holy God, and became the occasion of the first announcement of his character as *the Healer*. “There,” it is said, “he made for them a statute and an ordinance, and there he proved them, and said, If thou wilt diligently hearken to the voice of the Lord thy God, and wilt do that which is right in his sight, I will put none of these diseases upon thee

which I have brought upon the Egyptians, for I AM THE LORD THAT HEALETH THEE.”³

During the continuance of the first dispensation—the era of communications from God addressed to the senses—a dispensation partaking in every way more largely of temporal interests than the Gospel, which excelled in glory by reason of its spiritual character,—the infliction of diseases more closely followed transgressions of the divine command, and were more directly punitive of individual guilt than afterwards. This is implied in our Lord’s admonition to the impotent man, upon whom he had exercised miraculous healing, John v. 14 : “ Sin no more, lest a worse thing come unto thee.” When the divine ordinances had been fully set forth, and the blessings promised for their fulfilment enumerated, Leviticus xxvi., bodily diseases were the first punishments threatened upon the disobedient. “ If ye despise my statutes, and your soul abhor my judgments, I will even appoint over you terror,” (fearfulness—a plague,) “ consumption, and the burning ague, that shall consume the eyes.” And in the recapitulation of the laws and ordinances in Deuteronomy, Moses gives the same prominence to diseases as inflictions for sin, chap. xxi. 21, 22, 27, 28, 60, 61. “ The Lord shall make the pestilence cleave to thee until he hath consumed thee from off the land, whither thou goest to possess it. The Lord shall smite thee with a consumption, and

³ Exodus, ch. xv. 23—26.

with a fever, and with an inflammation, and with an extreme burning . . . with the botch of Egypt, with emerods, with madness, and blindness, and astonishment of heart . . . Also, every sickness and every plague which is not written in the book of the law.”

In conformity with this principle, numerous instances are recorded in the scripture narratives; the epidemic inflicted upon the Philistines, for their presumption in retaining the ark—the leprosy of Miriam,⁴ of Gehazi,⁵ of Uzziah⁶—the paralysis of Jeroboam⁷—the disease in the feet (probably elephantiasis) of Asa,⁸ that of Jehoram,⁹ described as exceedingly severe and distressing, and many others; and even in the New Testament, the blindness with which Elymas the sorcerer was smitten;¹ the fearful disease of Herod,² and the sickness and weakness of the unworthy communicants of Corinth,³ testify that bodily diseases were appointed to be the direct punishments of sin.

But during the progress, and with the development of the divine plans, a new character was given to physical disease. This primary, penal, and apparently essential effect of sin was converted into a subsidiary means of correcting, checking, and remedying moral evil, the direr and more fearful dis-

⁴ Numbers xii. 10.

⁵ 2 Kings v. 27.

⁶ 2 Chron. xxvi. 19.

⁷ 1 Kings xiii. 4.

⁸ 2 Chron. xvi. 11.

⁹ 2 Chron. xi. 18.

¹ Acts xiii. 11.

² Acts xii. 23.

³ 1 Cor. xi. 30.

ease itself. “Fools, because of their transgression, and because of their iniquities, are afflicted. Their soul abhorreth all manner of meat; and they draw nigh unto the gates of death. Then they cry unto the Lord in their trouble, and he saveth them out of their distresses. He sendeth his word and healeth them, and delivereth them from their destructions. Oh! that men would praise the Lord for his goodness!”⁴ The Psalmist expresses his own experience to be this: “Before I was afflicted I went astray, but now have I learned to keep thy law.”⁵ “It is good for me that I have been afflicted.”⁶ When Manasseh was afflicted, it is said he besought the Lord, and he was entreated of him, and heard his supplication.”⁷ “Whom the Lord loveth he chasteneth, and scourgeth every son whom he receiveth.” These sentiments have been the experience of the penitent in all ages. Hence, when the first dispensation was completed and consummated, and the promised deliverer, the Prince of *Peace* and of *Health*, as the title translated Prince of Peace, Isaiah ix. 6, imports,⁸ God, manifest in the flesh, came clothed in human nature to redeem us from the power and influence of evil, to reconcile us to God, by purifying a people to himself, prominent amid the miracles attesting his divinity, stood forth those illustrative of these connexions of physical and moral

⁴ Ps. cvii. 17.⁵ Ps. cxix. 67.⁶ Id. 71.⁷ 2 Chron. xxxiii. 13. Prov. iii. 11. Heb. xii. 6.⁸ See Note at the end of the chapter.

evil, the dependence of disease on sin, and the remedial character subsequently engrafted on the penalty.

“ He who restored the law of nature did also restore us to the condition of nature, which being violated by the introduction of death, Christ then repaired when he suffered, and overcame death for us; that is, he hath taken away the sting of death and the dishonour of the grave, of dissolution and weakness of decay and change, and hath turned them into acts of favour, into instances of comfort, into opportunities of virtue. Christ hath now knit them into rosaries and coronets, he hath put them into promises and rewards, he hath made them part of the portion of his elect,—they are instruments, and earnest, and securities, and passages to the greatest perfection of human nature and the divine promises.”⁹

Hence it is recorded, that “ he went about teaching and preaching the gospel, and healing all manner of sickness and all manner of disease among the people; and they brought unto him all sick people that were taken with divers diseases and torments, and those which were possessed with devils, and those which were lunatic, and those which had the palsy, and he healed them.”¹ And he thus made his power over these physical evils the great illustration of his personal character and his appointed work, and approved himself to be that GREAT PHYSICIAN

⁹ Bp. Jer. Taylor.

¹ Matt. iv. 23, et seq.

who at once “forgiveth all our iniquities, and healeth all our diseases.”² That the exercise of miraculous healing was selected as the most appropriate sensible evidence of the immediate presence of the Deity, we learn from Isaiah xxxv. 1—6: “Your God will come . . . and save you: then the eyes of the blind shall be opened, and the ears of the deaf shall be unstopped; the lame shall leap as an hart, and the tongue of the dumb sing.” Further, that it was designed to be a demonstration of the power and Divine nature of the MESSIAH is evident from the prominence given thereto at the very first beginning of our Lord’s ministry, and during its whole course. When the Baptist sends two of his disciples to make the inquiry, “Art thou he that should come? or look we for another?” (Luke vii. 20,) the miracles which were wrought and referred to in answer, were all the healing of diseases. Indeed, our Lord sets forth in an unquestionable form the pre-eminent weight of this species of evidence to support the professed possession of supernatural, yea, of Divine power, when healing the paralytic man whose case is related by three of the evangelists, Matthew ix. 2; Mark ii. 9; Luke v. 18. By comparing these several relations of this event, it would appear, that whilst the beginning of his miracles “upon those that were diseased,” sufficed to convince the unsophisticated minds of his earliest disciples, now, for the first time, were present as eye-witnesses, “Pharisees and doc-

² Ps. ciii. 3.

tors of the law," men disposed to cavil at the great truth of an incarnate Deity, and to think evil in their hearts of him who professed to be the "Son of God." Our Lord, therefore, first elicited from them the acknowledgment that the power to forgive sins can belong to God alone, and they could not afterward gainsay, or answer in any other way, the question, "Whether is easier to say to the sick of the *palsy*, Thy sins be forgiven thee, or to say, Arise and walk?" Nor can we now, with all the assistance of modern science, otherwise decide or dissent from their involuntary homage to truth, when for this miracle of healing they recognised and glorified God!

There are, however, two instances recorded in the sacred narrative in which diseases were imposed upon individuals, not for any particular sins which they had committed, not for any sinfulness of nature attaching peculiarly to themselves, nor as a penalty for inherited guilt. These instances, which appear to be exceptions to the general principle upon which diseases are commonly inflicted, are not unfrequently referred to, as if they established a rule that diseases are *never* the results of sin; whereas our Lord's declaration, with which they were expressly accompanied, that they were miraculous inflictions, to afford an opportunity for the manifestation of the glory of God, the exhibition and proof of his own divine character, and the nature of the mission he was fulfilling, shows them to be exceptions to the rule. He does not rebuke the inquiring dis-

ciples, who assume this principle when they ask, “Master, who did sin, this man or his parents, that he was born blind?” but he simply answers, in such terms as obviously limits the application to the especial case,—“Neither hath this man sinned nor his parents, but that the works of God should be made manifest in him.” (John ix.)

The sufferings and restoration of these individuals, like the affection and devotion of Mary Magdalen, became the occasion of ever-during instruction, encouragement, and consolation to the people of God. The case of the blind man presents us with a melancholy exhibition of the unreason, obstinacy, and malignity of the spiritually blind, and a striking manifestation of the power of Christ to enlighten and to heal both natural and spiritual blindness. That of Lazarus (John xi.) exhibits to us in a palpable example the change wrought in the “moral element of affliction,”³ the wrath of God overborne by redeeming love; “He whom thou lovest is sick,” announces to the Great Physician the occasion for the display of his omnipotence; and in the same act, his subjection to the limit of the will of God. It sets before us the most heart-moving sympathy with human sorrow felt by our great High-priest, for as “Jesus wept” at the tomb of Lazarus, we may derive assurance that he is ever touched by a feeling of our infirmities. His mighty power, in raising the natural dead to a new life, sets forth in an intelligible figure his spiritual

³ Wordsworth—Poems.

agency in quickening the dead in sin, and raising them up to a life of righteousness. It must not be imagined that the afflictions of the man blind from his birth, or of Lazarus, who was sick unto death, whilst occasions of manifesting the glory of God, were evils to themselves. No. To the former, it was the means of conversion, and to the latter, although he was already in the blessed condition of being loved by his Lord and Saviour, and therefore the narrative is silent, yet it must have been a glorious assurance of his faith and hope. They were indeed to both, light afflictions, which endured ~~but~~ for a moment, and were not worthy to be compared with the exceeding and eternal weight of glory which they worked out by faith for them.⁴

Further ; it is alleged by the evangelist concerning the Son of God, that in *His* exercise of the powers of healing was fulfilled that which was foretold by the prophet, “ Himself took our infirmities and bare our sicknesses,”⁵ thus foreshadowing and giving an earnest of the great atonement to be wrought by his vicarious death, the taking upon himself the punishment due to the sins of mankind. And still more profound mysteries, more awful truths are dimly suggested to us in subsequent scriptures, touching the meaning and relation of afflictions. The first lesson taught to the wondering disciples after the resurrection was, that “ it *behoved* Christ to suffer

⁴ 2 Cor. iv. 17 ; Rom. viii. 18.

⁵ Matt. viii. 17.

and to enter into glory.”⁶ And the apostle afterwards, enlarging upon this solemn and mysterious doctrine, says, “It *became* him for whom are all things, and by whom are all things, in bringing many sons into glory, to make the Captain of their salvation perfect *through sufferings*.”⁷ And, as if in the depth of his sympathy for his suffering people, his unparalleled sufferings could throw a reflection even to the throne of his glory, the same apostle, who drank deeply of his Lord and Master’s cup of woe, represents his own sufferings as filling up the measure of Christ’s afflictions, endured for his body’s sake, the Church. (Col. i. 24.)

Under the spiritual dispensation of the Gospel, physical evil, i. e. bodily disease and mental afflictions continued, if not so often simple punishments inflicted in wrath, yet as frequently occasions of correction, instruments and opportunities of conversion, and temporal chastisements of the most favoured and holy servants of God. The apostle reminds the Thessalonians that it was in much affliction that they first received the word of life;⁸ the Corinthians, that their sicknesses were chastisements of the Lord, inflicted that they should not be condemned with the world;⁹ the Hebrews, that no affliction for the present seemeth to be joyous, but grievous: nevertheless, afterward it yieldeth the peaceable fruit of

⁶ Luke xxiv. 26—46.

⁷ Heb. ii. 10.

⁸ 1 Thess. i. 6.

⁹ 1 Cor. xi. 32.

righteousness, to them that are exercised thereby.¹ Our glorified Lord, as if to give a more impressive and solemn assurance, that this principle, which had been enacted in all former dispensations, should continue in force to the end, communicated to the last of the apostles, in the apocalyptic vision, the gracious assurance, "As many as I love, I rebuke and chasten."² And as a final message, the promise was included, that in the consummated happiness of the saints, pain and sorrow, disease and death, will be for ever abolished.³ But the *last* enemy that shall be destroyed is death. And it *may be* that in accordance with the usual character of the divine proceedings, namely progressive growth, gradual development and manifestation, that we, *now* under the Gospel dispensation, whilst the Spirit of God resident in his church is fulfilling his great spiritual designs, may discover in the phenomena, prevalence and consequences of disease, some approximation towards this result; we may be able to discern, if we seek for it, some mark or indication, of such a tendency in the workings of nature. We may perchance note the prevalence of some principles and powers gradually but inevitably accomplishing prophecy.

But apart from their uses as moral correctives and remedies for sin, and as exhibitions of the power of Christ attesting his miraculous agency, diseases are

¹ Heb. xii. 11.

² Rev. iii. 19.

³ Rev. xxi. 4.

to man himself a great and grievous evil. A standing and indisputable proof of moral pollution—of mischief somehow, wrought in the fair and good creation of a benevolent God, rendering that evil palpable and otherwise evident to sense, which has its root in our spiritual nature—which lurks in those depths of the human heart, where consciousness penetrates not, and which might be perversely denied were it not thus felt. Diseases are physical *facts* universal and undeniable. And the justice of God is thus vindicated by his severity in these penal inflictions for moral guilt.

“Where is the wise disputer of this world who says, that pain and affliction are not evils; who, sufficient to himself, indifferent to things external, boasts that he could be unmoved in calamity, at ease in torment? Bring him to Gethsemane; there shall he see a just man and a perfect—a man whose life hath been piety and love, unaffected piety, disinterested love,—a man in whose ample mind are hidden all the treasures of knowledge,—a man assuredly entitled to every comfort which the consciousness of perfection, of perfect wisdom, and perfect virtue can bestow. He shall see this wise, this good, this perfect man—this man in union with divinity, overwhelmed with grief and tribulation; ‘surely he bears our griefs and carries our sorrows, he undergoes the chastisement of our peace.’ See his mortified looks, his troubled gestures! See the bloody sweat! strange symptom of the unutterable pangs

that rend his righteous heart. See him prostrate on the earth in anxious supplication. Humble thyself, oh ! vain philosophy ! dismiss thy arrogant maxims ! learn from this affecting spectacle a better wisdom than thine own ; learn it from him who brought it from above ! Say not then that affliction is not an evil—say that it is to be borne with humility as the punishment of sin,—to be endured with fortitude as the instrument of good—to be accepted with thankfulness as the discipline of God, whereby he trains his sons to virtue and fits the virtuous for glory. But confess that it is that which the most perfect natures do most abhor, that which it is the wisdom of man, with due submission to the dispensations of providence, to shun.”⁴

It is not, however, in the word of Revelation only, and in the scheme of man’s eternal redemption, that God has exhibited to us his mercy and loving-kindness associated with his judgments, but he has given us occasion, by the mere consideration of nature, the condition of man in his present state, to exclaim with the apostle, “O the goodness and severity of God !” The primary curse which subjected man, for the continuance of this present life, to incessant toil, “In the sweat of thy brow shalt thou eat bread,” was immediately tempered by connecting with labour many alleviating circumstances independent of moral considerations, by making it a means of procuring an exemption from many diseases, and by rendering the

⁴ Bishop Horsley.

bread so earned and the rest so induced, sweet to his appetite and grateful to his physical nature. In like manner God has implanted in our natural bodies, remedial powers, means of restoration, checks and limitations to the ravages of disease. He has restrained and controlled by laws imposed in mercy those physical agents to which he has confided the mission to hurt us. He has endowed many substances, around us and within our reach, with powers to alleviate suffering, to mitigate affliction, to suspend the final issue, dissolution and death; he has said to the billows of affliction as to those of the ocean, “Hitherto shalt thou go and no further, and here shall thy proud waves be stayed.” In those restrictions and limits to the power of disease—in the endowments of natural substances with properties which are remedial, we can trace the same fatherly goodness which chastening but for good, and afflicting but for correction, exclaims over the impenitent, “How shall I smite thee, O Ephraim? How shall I give thee up, O Israel? How shall I make thee as Admah? How shall I set thee as Zeboim? my heart is turned within me, my repentings are kindled already.”⁵

Now diseases and the remedial powers and agents discoverable in nature and considered in reference to their laws, mutual relations and more immediate effects are the daily and necessary study of the physician, but to *me*, the *designs* of their institu-

⁵ Hosea xi. 8. Archbishop Leighton's Translation.

tion, of their forms, their collocation, and their histories, with their predestinated ends, both those which they are *seen* to subserve and those more recondite results, which, extending beyond the limits of mortal vision, can be followed only by the eye of faith ; — these furnish me perpetual food for contemplative recreation. I bring diseases and remedies into the light of revelation, and considering their features so illuminated, obtain a glimpse into some of the deep things of God. The precise mechanisms he employs to effect his purposes of severity and grace are involved in them ; they link together the invisible influences of God, known to us only by faith with the visible workings of his hand in nature ; they display his wisdom and his power, they prove his providence, they open up to us his future designs, and they reflect back a vivid illustration of his redeeming love, by exhibiting the manner and order of his thoughts towards us, when in wrath he remembers mercy !

We read in the history of our Lord, recorded by St. John, (vi. 2,) that the multitude which followed him, because they saw his miracles “ which he did on them that were diseased,” were fed with that miraculous bread which so wonderfully manifested his divine power as the CREATOR. In like manner would I beseech him to vouchsafe his gracious benediction upon this treatise, that all those who therein see him still exercising the same benevolent purposes upon all that are diseased, may be induced to

follow him, and may receive a further illumination and communication of his power, and be fed with the bread of life !

NOTE—page 10.

The word שְׁלוֹם, rendered in the English version, Peace, Prosperity, Health, &c., implies “ *The effect produced by the harmonious co-operation of diverse powers, all tending to one and the same end.*”

The effect of this equilibrium in the human body we call *Health*. The same effect in a social body—a family, a nation, or mankind, we denominate *Peace*. In reference to those, in their external circumstances, we use the word *Prosperity*. The Hebrews further used the word *Sholem*, to express a happy balance of intellectual and physical powers.⁶ It was their salutation.

The prophet Isaiah says, xxxii. 17, “The work of righteousness shall be PEACE,” *i. e.* health of mind and of body, tranquillity, harmony, safety, prosperity of every sort, a combination of all good, the height of human bliss.

The term “Shiloh” applied to the promised deliverer in Genesis,—long before the title of Messiah was used to designate the Saviour,—implies the giver of Peace, of Health. The radical שָׁלֵה, he was prosperous, tranquil, and its corresponding noun, Peace, Prosperity, Rest, Quietness, occur very frequently in the sacred writers, and in some instances it would serve to enlighten the passage, to bear in mind the reference to bodily health involved in its meaning. Thus, in Ps. xxx. 6, where it stands in our translation “prosperity,” if we render it *health* we clear up the meaning and application of the whole Psalm, which is evidently an ode of thanksgiving for recovery from bodily and dangerous sickness, whilst it appears from the superscription, the expressions implying this, have been regarded as figurative of political depression and subsequent success.

See also Numbers vi. 22—26 ; Ps. xxxviii. 3, *rest*, in the

⁶ Hyman Hurwitz.

margin *health*. Job xx. 20 ; xxi. 23. Isaiah lvii. 18, et seq. " There is no *peace*, saith my God to the wicked." The tendency of moral transgression to destroy the *health* of the *body*, strikingly illustrates the foundation of moral obligations, a point to be enlarged on in the sequel.

CHAPTER II.

THE PHYSICIAN'S RECEPTION OF THE CHRISTIAN EVIDENCES.

HIS QUALIFICATION AND DUTY TO TEACH.

ARGUMENT.—A Christian Physician's view of the charge of infidelity brought against his profession—Force of the evidences for the truth of revelation—Necessity of faith to man's mental and moral faculties—Religious faith—Conversion, its nature, causes, and effects—Who is to teach and propagate the truth?—The Physician's qualification and duty to teach.

MY profession, I well know, has long borne the suspicion of having a tendency to infidelity. It was of old a proverb, "where are three physicians are two Atheists:" we need not inquire whether that suspicion has now, at this day, become obsolete. It never could have been deserved. Those melancholy abodes where men dwell with "reason unthroned," have not usually been peopled with physicians; and the man who denies the existence of a God more needs "restraint and hellebore" than persuasion or logic. But that unhappily a large proportion of those who profess to study diseases

and administer remedies, have formally rejected the offer of the Gospel, and are declared enemies of the cross of Christ, must be admitted. The reasons for this are obvious; they,—in common with other men,—partake of human corruption and liability to err; their pursuits render them conversant with innumerable facts in nature; they find in mere physical truths, in objects cognisant to the senses, an inexhaustible field of inquiry. To these, by the nature of their studies, their attention is enforced. Every individual mind is defective and has its weaknesses; time is limited, and their whole occupation in their necessary sphere of their studies is apt to become engrossed by the discovery of *what is?* The further question, *why is it so?* what is the final cause or end of these things? they have not time to propose or to answer. Of nature's myriads of truths all cannot be sought out, her vast compass cannot be embraced, nor her depths sounded everywhere, or by all. The physician must study the organisations and processes of material bodies; these are presumed to be enough for the memory, and life may be passed, without looking beyond them, without an inquiry whether there be "powers invisible," "influences not cognisant to sense," "things beyond the reach of our philosophy." Above all, the grace of God does not restrain or direct irresistibly any one class of mankind, and the learned and the skilful are beset by peculiar and subtle temptations. What wonder, then, that the

ranks of the oppugners of the Gospel of Christ should be augmented by physicians? What wonder that a sad proportion of the literature which is opposed to the scriptures of truth, should have emanated from them? Nevertheless, one feature characterises nearly every instance of medical infidelity. Men—who, whatever in other respects may have been their learning or their science—have not studied this matter, have yet, inconsistently with their own daily practice in matters of science, pronounced their opinions against Christianity. Upon all other subjects which had not received their especial attention, they would readily acknowledge themselves disqualified from offering an opinion, and they would meet with scorn any attempt of others to treat their own profession as they have treated religion, at once assailing and confessing ignorance of physic. By such inconsistency only has a suspicion of infidelity often been attached to the whole profession. Let the unprofessional reader be assured that there is nothing in the pursuits of the physician having a tendency to engender scepticism—there is not in the whole circle of the medical sciences a single fact, a single established truth which throws a suspicion upon the truth of the Gospel, or casts the faintest shadow on its glory! On the contrary, between the working of moral evil, (sin,) and the ravages of disease; the Gospel scheme and the remedial powers of nature, there exist the most striking and close analogies.

And so far as we are entitled to infer an identity of origin and purpose, when we discover minute resemblances in parallel instances, i. e. so far as we may legitimately reason by way of analogy, so far would the sciences of medicine furnish proofs of the divine origin of our most holy faith. Perhaps the strongest bulwarks for the external defence and security thereof, which reason could erect with materials derived from nature, would be supplied by these sciences. It is not, therefore, medical knowledge, but the lack of attention to spiritual things, the engrossing character of the physician's pursuits, which have led many hitherto to appear champions of infidelity. Henceforth, . . if the signs of the times be not too sanguinely interpreted in such a supposition, . . we may look to the profession for essential illustrations of the Christian Scriptures, as well as for the completion of the external evidences. Such accessions of strength to the outworks of revelation ought not now, indeed, to be needed. If men are ever to allow questions, once agitated by contending reasons, to be settled by a vast preponderance on one side, this question—whether the Christian Scriptures be really the authentic record of communications made to mankind by the Creator and Sustainer of the material world,—would be universally received in the affirmative. Yet it is upon this point, Infidelity, either avowedly or tacitly, takes its stand. Conceding the existence of God,—which, indeed, it would be impossible for a sane mind to

deny,—it would leave us to believe that the Deity has never interfered in human affairs, that he has left man in the strangely varied scene of life,—in the intermingled happiness and woe, joy and suffering, right and wrong, without an end or object. Or if his being is to be continued beyond the present state,—a point the rejecter of revelation must admit to be at least very questionable,—his Maker has committed him to the troubled ocean of life without a compass or a guide. If a mere blind deference to authority were of any value, or ever to be encouraged and applauded, we might adduce a host of names from among physicians,—great and good men,—who have honoured their own profession, and have embraced for themselves the faith, and have been champions of christian truth; and we should find they would far outnumber the sceptics, and far outweigh all the enemies of the Gospel. But too often it has rendered men more conspicuous; has offered them a shorter road to fame, to profess themselves on the side of the world, and to blazon forth, for a momentary triumph, some of the many difficulties which it requires but little acumen to discover, and which necessarily attach to every historical or philosophical question about which the human mind can be occupied. It must never be denied that difficulties of this nature, arising from the limited scope of man's intellect, are met with in every page of revelation. But, if the great design of revelation and the creation of man be

duly considered, they are not found there, for any evil end, but for good.

Let us, then, take a cursory glance, with the eye of a Physician,—one who seeks truth in many departments of nature, and with various aids and instruments as each demands, bringing his experience in one to enlighten him in others,—over the ground of our belief, and the substance of the matter to which our faith is demanded.

Admitting the existence of a God, there are abundant reasons antecedent to all experience, (that is, *à priori*,) deducible from every aspect in which we can contemplate human nature, for the expectation that HE would, in some way, discover himself to mankind, reveal to us his own will, and point out somewhat of man's future destinies. The acts and laws of the human mind, (implanted by God, according to our admission of his being,) whether of the understanding or the will, appear everywhere productive of such an expectation under every diversity of condition, clime, and manner of existence, in which man is found. Hence the practice of the ambitious and the cunning of feigning themselves to be the favoured recipients of the divine communication, and the facility with which such pretensions everywhere impose upon the multitude. This expectation appears to be coincident with the belief of God's existence, and, as has been well said, "It would imply a most absurd mistake of nature to implant in the human mind the feeling

to be troubled about a God, if, indeed, there were none!"¹ So it would be unaccountable that man everywhere should look for some divine communication, if a *need* of it were not deeply rooted in our nature. On the other hand, I cannot find even the shadow of an argument, to render such a communication from the Deity impossible or even improbable. It has been looked for, by men in all times as well as in all places, and the extension of knowledge and accumulation of experience continually strengthen its inherent probability, by showing the entire inadequacy of the most advanced science to resolve the many problems which surround our moral nature.

For had it been possible that science had thus advanced, before God had vouchsafed to us a revelation, instead of satisfying the yearnings of our minds and hearts, to lift the veil from the invisible world and open up some glimpse of the future, it would but have made the interposition of the Deity for these purposes more desirable.

And what a mass of evidence, what a cloud of witnesses, what an accumulation of arguments have there been brought to establish the claims of the Bible, to be the very communication from God which men so anxiously looked for, so greatly needed! And has all this been in vain? Have not its truth, authenticity, and authorship been established to the satisfaction of multitudes of the best,

¹ Henry More.

the most acute, the most reasonable men? Who is there who now calls in question the great fact of God having in very deed spoken with men, and who desires to be deemed a candid lover of truth? Let him, if such a man there be, first refute all the concurrent testimony to this fact, or bring some new *experimentum crucis* to satisfy us of its fallacy. If no one has accomplished or can accomplish this, and yet men still venture to deny the truth of the divine communication, is not this to be as unscientific and as unreasonable, as it is unjust and impious?

I would, therefore, emphatically caution the young and inexperienced, especially of my own profession, who can be but superficially acquainted with the evidences, against entertaining for a moment the supposition that there is anything in infidelity which indicates a superiority of understanding, a more enlarged mind, or a more liberal spirit.

“For however certain modern pretenders to superior wisdom may affect to speak contemptuously of the credulity of the vulgar, and think that they display their own refinement and penetration by a resistance of the evidence which satisfies the generality of men; the truth is, that nothing is so much a genuine mark of barbarism as an obstinate incredulity. The evil-minded and the illiterate, from very different causes, agree, however, in this, that they are always the last to believe upon any evidence less than the testimony of their own senses. Ingenuous minds are unwilling to suspect those frauds

in other men to which they feel an aversion themselves ; they always, therefore, give testimony its fair weight. The larger a man's opportunities have been of becoming acquainted with the occurrences of his own and former ages, the more he knows of effects daily arising from causes which never were expected to produce them ; of effects in the natural world, of which he cannot trace the cause ; and of facts in the history of mankind which can be referred to no principle in human nature ;—to nothing within the art and contrivance of man. Hence the man of science and speculation, as his knowledge enlarges, loses his attachment to a principle to which the barbarian steadily adheres,—that of measuring the probability of strange facts by his own experience,—and will be at least as slow to reject as to receive testimony, and he will avoid that obstinacy of unbelief which is satisfied with nothing but ocular demonstration.”²

But irresistible as are the arguments, and cogent the proofs from historical data, it is in the contents of the sacred volume itself, that the chief weight of evidence lies for its genuineness and its divine origin : with the book itself in our hands we may, without derogating from reason or exciting any fair suspicion of our candour, disregard altogether the external evidences, and bend our attention to the revelation itself. Instead of for ever remaining without the temple of truth, inquiring whether its foundation be

² Bishop Horsley.

secure, we may enter the sacred precincts and acquaint ourselves with its mysteries. Within its boundaries, the field of inquiry is inexhaustible, the invitations to explore urgent, the promises of aid and the foregone success of others most encouraging ; and if we proceed in this course of inquiry in the right spirit, on the principles of genuine philosophy, we shall most assuredly be rewarded by the clearest assurances, the most satisfactory convictions, that we are therein holding converse with God—that we are, as it were, communing face to face with our Maker.

The difficulties which infidelity encounters in every assault upon the *external* evidences, are multiplied exceedingly, when it would assail the *internal*,—those which are furnished us by a comparison of Scripture with nature,—an examination of scriptural statements by our best faculties : and when, with a sound heart and a clear head, they are investigated by the light of reason and the dictates of common sense. It is a mistake which belongs to an inexperienced age, or an unfurnished mind, to imagine that our faith is challenged in Scripture to anything contradictory to the dictates of those faculties by which we investigate things natural ; on the contrary, it exhibits to us a profound harmony with all creation, a deep sympathy with the sufferings of the creature “ subject to vanity,” it presents us with a rich feast to satisfy our cravings for knowledge, a full fruition of man’s best hopes and highest aspirations. To men who are capable of turning their contemplation in-

wards, watching the processes, analysing the motives, and tracing the springs of action in their own hearts, the correspondence and coincidence of the facts and statements of Scripture with what they therein discover are truly wonderful. He is therein indeed furnished with the *only* clue to that labyrinth, the only mirror in which the true image of himself may be seen, and the only guide to that valuable acquisition, self-knowledge.

‘God forbid that we should think of attempting to give dignity by human praise to that which proceeded from infinite wisdom!’ But as a physician, I desire to press the Holy Scriptures upon the attention of my younger brethren, as the most important aid and adjunct of their earliest studies, and the most useful and indispensable accompaniment of their whole course, that is, their whole lives, for with life only can our studies terminate; and the result will infallibly be, as experience accumulates and judgment strengthens and improves, that they will be found infinitely to surpass in every valuable quality all other writings. Whatever reverence we may feel for the imperishable productions of genius in poetry and art, whether of ancient or modern times; whatever enjoyment in the acquisition of the sciences; neither can afford us any abiding satisfaction. Our tastes for the former fluctuate, our gratification in them abates with our advancing years. Science partakes of the instability of everything human; in its very progress and advancement, the individual mind

feels its weakness and unsatisfactory nature. No sooner do we appear to have reached the summit to which the eye had long been directed, and toward which we had painfully toiled, than loftier heights beyond again present themselves ; when we dream that we have at length acquired some solid truth, new discoveries throw down all our cherished opinions and systems. If we relax our exertions to keep pace with the onward progress of human knowledge but for a short time, we find a new language to acquire, a necessity for beginning our studies anew.

The christian Scriptures alone, of all literature, maintain a steady hold upon the mind and affections, from the earliest youth to the maturest age ; and although they afford subjects of inquiry and interest inexhaustible, they yet furnish an abiding and permanent resting-place both for the understanding and the heart, amid the tumult and storms of human life.

Whether, in this comparison of the Holy Scriptures with human literature, we consider simply their contents, or beyond this their moral effects, we cannot conceive their reputed authors could have been able to produce them without the Divine aid. This aid they themselves assert they received, and such an explanation we must at once feel to be satisfactory. And when a man of science, (a physician especially, from the nature of his habits and studies,) is intimately acquainted with those con-

tents, and experimentally with their moral effects on the mind, he is entitled to demand from the Infidel, who should undertake to refute, or should venture to sneer at the evidences, a more satisfactory theory of their authorship. He could not, philosophically, rest satisfied with doubts and hesitations, of which some few may be discovered, dependent upon difficulties in tracing historical events. He is accustomed daily in his own vocation to weigh and compare conflicting testimony, but he cannot remain long in suspense or doubt ; he is compelled to decide, and in general, it cannot be disputed, he will decide on the side of truth and reality. This habit of decision, exercised with becoming caution, lest prejudice or passion should usurp the dominion of truth, he *ought* to extend to the theories, proposed for solving any set of phenomena.

The peculiarities of the Scriptures ; their diversity from all other literature ; their contents ; their influence on the history of mankind, on the present and visible condition of all nations ; the effects daily witnessed, upon the men who study them and yield to their authority ; are facts which we require some theory to connect—some adequate cause to account for—some link to associate them in our mental stores.

The believer, the Christian, alone offers us a satisfactory solution of these phenomena, when he alleges that “ Holy men of God spake as they were moved

by the Holy Ghost ;” that the Creator and Sustainer of the visible universe has been pleased to communicate with men in the manner and at the times best adapted to the faculties he has bestowed upon them.

In what manner and by what means, then, is the human mind to apprehend and appropriate the divine communication ?

The answer to this most important inquiry is, unquestionably, by the exercise of FAITH.

This is the declared principle of the Scriptures, repeated in the most diversified phraseology, illustrated by every variety of imagery, and impressed with such solemn sanctions, that could any fallacy be detected, any philosophical unreason or untruth relative to our nature be found involved in it, the whole fabric of revealed religion would fall to the ground.

What then is *faith*, upon which so much is based, such vast interests are dependent ?

When we speak of religious faith, men indulge themselves in suspicions, that a demand is made upon them to slight the evidence of their senses, to neglect the inferences of fair argument, and shun the just conclusions of right reason ; they suppose that faith is something akin to blind credulity, that it implies uninquiring acquiescence in mystical statements, which can be tested by no experience, and associated by no law of the human understanding. Unbelievers choose to imagine that there is in this respect some peculiarity in the claims of sacred story, some weak-

ness of proof, or defect of evidence, which compels it to rely on principles diverse from the ordinary foundations of belief. Such opinions, however, can only arise, either, on the one hand, from ignorance of the scriptural representations concerning faith, or, on the other, from an inadequate acquaintance with the human mind, the principles and springs of human action, the instinctive part of our moral and mental acts, the limits, operations, and objects of reason, the office of the imagination, the influence of the affections upon our judgments, the sources and dependencies of our knowledge. In one word, the man who objects to religious truth, because the only channel through which it can reach our understandings is Faith, has made little progress in the knowledge of himself or of nature !

Vast as the structure of human science certainly is, wonderful as are its achievements when regarded in certain aspects ; as, for instance, when we compare the mental acquisition of a mere savage with the contents of a modern cyclopedia ; there is equally in its first and feeblest efforts, and in its highest attainments, a limit and a bound felt, beyond which the human mind cannot pass.

There is in the simplest case of mutual action and re-action of any two substances in nature much that we cannot penetrate. In the fall of a leaf, in its decay and resolution into its constituent elements, (not to speak of its first mysterious construction and growth,) there are powers and principles in operation we vain

would but cannot comprehend. And when the co-operation of many sciences brings forth from this simple event a multitude of important truths, we find in the very first and most obvious of them the origin of its motion, and in every one ultimate truth severally, a mystery beyond our powers to unravel.

There is certainly a wide field, an inexhaustible universe of truth, of which we may obtain cognisance by our senses ; and as sensation is the first link in the chain, the first act of a lengthened train of thought, some have attempted to resolve all knowledge into sensations, as its component elements ; and as this hypothesis would enable them to get rid at once of the inconvenient claims of religion, it has been repeated in a variety of shapes and manners. But many, far more profound thinkers than the sensualists,* have been accustomed to speak of sensible experience as the most certain and satisfactory of all knowledge. It is now a well-established truth, that during the first years of childhood, while we are acquiring knowledge most unmingledly from this source, we are unable to turn our mental vision inwards, and to see whence our stores for future use are being derived. We are, therefore, never afterwards able to distinguish between the precise *objects* of sense, and the inferences which our mental powers, acting according to their pre-ordained laws, draw from and mix up with them. We are unable to determine what particular impressions we derive from the sense, and what part of our notions are from our own being, or,

* Certain followers of Locke so called.

to use technical language, what is the *objective*, and what the *subjective* part of our knowledge. For the purpose of investigation and study, these powers,—i. e. of receiving impressions from external objects, of storing them up for future use, of inferring or extracting from them such suggestions as our nature permits,—these powers, we say, are themselves *objects* of knowledge; and it must strike the reader who is not already conversant with the fact, as almost paradoxical, that while all mankind from the creation were deriving their knowledge of external things through the impression of their senses, it was unknown until the last few years how many senses man possessed. It serves to exhibit the parallel ignorance and knowledge of the human mind in a striking point of view, to reflect that while men were ever using their eyes, they did not know what they actually saw of the objects around them, as distinguished from what was inferential and belonging to inner and more recondite faculties than sight; of the fact itself, no one now, with any pretension to science, can doubt. The successive discoveries of Bishop Berkeley, Dr. Thomas Brown, and Sir Charles Bell, of the primary objects of vision, separable from the secondary or inferred, and of the sense through which our knowledge of extension, angular form, and therefore distance is derived, are indisputable. The first of these writers proved, by mathematical demonstration, that we could not possibly literally *see*, what every one *thinks* and *believes* he sees, namely, distance; and he therefore made the paradoxical infer-

ence, that space had no existence, because objects occupying space cannot be known by sight. When Cheselden, by a surgical operation, suddenly gave sight to a young man who had been blind nearly from birth, he saw all objects as if they touched his eyes; he could not perceive distance, shapes, nor magnitudes; but he gradually learned to associate the knowledge he derived from handling objects with the feeling they produced in his eyes,—the objects of vision and touch. Thus, the argument of Berkeley, which was chiefly mathematical and necessary in the nature of things, was experimentally proved to be true; and a remarkable passage of Scripture, which had stood for seventeen hundred years incomprehensible, became understood. (Mark viii. 24, 25.) Berkeley's inference that there is no external object, nothing possessed of *outness* (as he phrased it) to mind, is not supported by this case; but the question, *how we know* externality, was still open. Many facts seemed to prove it could not be by touch, and Dr. T. Brown completely established this truth, whilst he clearly indicated the source from whence we derive the sense of shape, distance, and resistance; and showed that it is to these sensations that belief in external things is linked by a law of our nature; that this belief is a mental act, which we cannot separate from the impressions derived from this hitherto undetected sense, this sense being seated in a portion of the muscular part of our fabric. It has been always known to anatomists, that each of

the five known senses depended upon, and was seated in certain bodily organs termed nerves, offsets of the brain,—the part of the body most directly, although very mysteriously, connected with mind. Now, Sir Charles Bell completed the curious discovery of the muscular sense, which had before escaped the notice of mankind, by showing, that in the muscles possessed of the property of communicating a sense of their state of extension, and therefore of shape, angularity, and resistance, *there are nerves*, which are the seat of this sense.

Thus, by these successive discoveries, it has at length been explained to us upon what ground we believe in things cognisant to sense; that it is by virtue of a law for which we cannot account, connecting a belief in their external existence with the first exercise of perception through this previously unknown channel. How much more may there be in our nature yet undiscovered? How far are we now warranted in considering knowledge referable to sense as the most certain and satisfactory?

But taking man as an individual, we may be certain that the most perfect exercise of his senses, and the most rigorous use of his reason and other powers upon their impressions, both objective and subjective, would, without other sources of knowledge, constitute a miserably defective being. In the course of the training and education of every man, knowledge is insinuated and inextricably interwoven into his mental up-growth, for which he never has had,

and never can have, any sensible evidence. If we subject our intellectual acquisitions to the process of analysis, we shall discover that every kind of notion which can enter into and form part of them, simple fact, abstractions, compound ideas, active and passive principles, are of this kind ; and from them it is impossible for the adult to disentangle himself, to any practically useful purpose, by any process. The faculty of reason is the power we have over our notions,—simple, compound, or concrete,—to separate, abstract, and combine parts into new wholes (conception), applying every thing once apprehended to new notions, thoughts, or perceptions, and judging of resemblances or dissimilitudes. And reason, to be of any value, must employ materials derived from every source, and cannot be confined to sensible truths. The limit of the sensible experience of individuals is so narrow, that had the Author of our being confined us within it for the exercise of our reason, and for our assured and well-established conclusions, there would be small hope of human advancement. But he has been more bountiful, and by a law which we cannot abrogate nor evade, he has compelled us to receive our first lessons, and to build up into the entire superstructure of our knowledge, the greater part of the materials, without questioning or disputing, and without the slow and doubtful process of obtaining it by our own senses ; to make, in fact, our intellectual being mainly dependent upon FAITH.

In many of our mental processes is involved the assumption of principles or conditions which, as they are universal, that is, operative upon the whole species by a law altogether irrespective of human will, are tacitly admitted, granted, and acted upon, without having attracted so much notice as to require to be distinguished by a name. Thus, in the first notions imbibed in childhood from our parents, in the earliest information we obtain of surrounding objects, in the first lessons given us in every branch of human knowledge, in every transaction in common life, and in the whole compass of literature, it is tacitly assumed that there is in human nature a principle of veracity ; that man in general imparts to his fellow-man on all subjects the *truth*. In early life we yield ourselves on all occasions and indiscriminately to the influence of this principle ; and when we come by sad experience to know that in fact certain exceptions and limitations to it must be expected in our intercourse with our fellow-men, we always and unhesitatingly attribute these to the depravity of man—to a corrupt will, to wicked motives, and that narrow and ignorant preference of self on which depends the greater part of moral evil. To that principle of unhesitating confidence, with which from infancy we are accustomed to believe in the veracity of mankind, we have no just and specific term appropriated. The word *belief* implies the assent of the understanding to a proposition formally stated, and does not necessarily

involve any consequent act. The principle in question operates upon us like an instinct ; we are informed—we act ; no hesitation, no questioning interposes. Our emotions are excited, we yield implicitly to their current. There is no necessity to mark by a name the implication, that upon the whole, man is true to man, and that our entire assent is yielded without inquiry and questioning, in all ordinary cases of human intercourse. So far as we, the *subjects* of this principle, are concerned, it is in every case identical to what in certain *peculiar* cases, where *especial objects* are involved, is termed *Faith*. We in fact exercise *Faith* in all matters of common life ; in all intercourse of individuals out of each other's sight ; in all writing, especially of history ; in everything, in short, in which we exercise the functions of rational beings. Our whole lives are made up of acts of faith—that is, of implicit trust and confidence in each other, as contradistinguished from the results of reason deduced from our own personal experience. The food of which we are to partake may be poison. The intelligence of the letter just brought me from a distant land, and upon which I am about to stake my whole happiness, how many doubts, were I not instinctively under the influence of the general principle, might arise concerning it to interfere with my conduct ! The vast sheet of daily intelligence supplied by the press, with reports from the market, the camp, the city, the senate, makes large claims

upon my faith ; shall my acquiescence in its statements be suspended until I am put in possession of satisfactory proofs of its veracity ? Impossible ! All men put implicit and immediate trust in such of its facts where the passions and selfishness of the writers and reporters interfere not. In its expressions of opinion, its party bias, we look for, and find abundance of deceit, malice, and all uncharitableness ; but all this cannot interrupt our faith in its veracity, and yet how many men must be confided in to allow us to make it a guide to our practice !

It may, however, be said that in ordinary instances in which we place such confidence in men, we are enabled to judge of the information they impart to us by comparing it with what has come under our own observation—that by a process of analogical reasoning, if not by the direct application of our own experience, we can test intelligence of every possible kind, whether brought from distant countries by the traveller, or recorded in past times by the historian. Exactly so. When doubts arise, it is thus we endeavour to determine them. And precisely similar processes of proof from analogy are applicable to every part of revelation, to everything we are called upon to receive by faith. A full exposition of the analogies of nature to complete the evidences of Christianity, belongs to a state of perfection in science, towards which our efforts and successes are tending. In the meantime, with every acquisition of true philosophy,

an addition is made to the supports and stays of our faith, by widening the sphere in nature with which the comparison can be made. And if it has happened not unfrequently that supposed discoveries have for a moment appeared to be opposed to revealed truths, it has always been found upon a more searching investigation that the discrepancy has only arisen from some latent error, and the light of revelation has but shone the brighter for the temporary dimness and shadow cast upon it.

So far then as faith is *subjective*, so far as it implies our unhesitating assumption of truths which our reason can lay no claim to, nor our personal experience test, men exercise abundance of *faith*. It is when its object is God, our Maker, ETERNAL TRUTH, that men begin to measure communications by their own experience, to talk (O how idly!) of their own reason, to sneer at truths known only by faith. And yet this information has been imparted to us in the same manner, and by the instrumentality of agents who would have been implicitly trusted upon other matters.

Men, holy and good men, (as all the world admits, for no one has had the audacity to question their moral character) have had the exalted honour of receiving direct communications, messages of mercy and of love to their fellows, from the CREATOR and SUSTAINER of the universe. These, they simply, honestly, frankly, and without the least ground

for a suspicion of selfishness, communicate to the world.

The main requirements of God through them is that we exercise *faith*,—faith which shall have *Him*, His goodness, His power, His holiness, His love and mercy, and at the same time His just and righteous character, for its objective realities. But here men make a stand; *now* they disparage faith, at this point they choose to become diligent in the search for doubts, to disbelieve and reject because they cannot test the communication by their own experience, they cannot extend to it their own reason. O inconsistent and perverse man! How inconceivably absurd and unreasonable would this proceeding of the human mind be, did we not learn from the same divine source a complete solution of the strange anomaly! We are informed that spiritual unbelief is the natural fruit of an evil heart, that by nature man is alienated from God by wicked works, that sin blinds the eyes of the understanding, warps the judgment, vitiates the taste, and perverts the reason.

Now the very nature of a revelation implies a necessity for the exercise of *faith*. With our limited powers, as has been shown, it was absolutely necessary that man should be informed of particulars, of truths, out of the sphere of his own observation; while physical truths, to which he lends his most urgent and devoted attention, are but slowly and

from age to age gradually apprehended. Moral truths, the metaphysic of our nature, the whole bearing and scope of our social duty, our mental powers themselves, will probably never be satisfactorily known. How much less then, things so utterly beyond our reach as those which revelation teaches, THE ORIGIN OF THINGS, the PROVIDENCE OF GOD, the state to which man is introduced at death, the nature of the Divine Being himself;—how should man, unaided by supernatural means, attain to any satisfactory conclusions upon such topics? And when once a communication is opened up by the Creator, with mankind, is it not inconceivable that they should reject the divine instruction on the ground that they are called upon to receive it in faith; and that matters are imparted for practical purposes, which theoretically they cannot reconcile to their own experience, to their own reason, as the expression is usually framed? Within us, and around us, as the man of science knows well, are mysteries innumerable, truths of vital import, of which but a dim perception can be obtained, and into which we strive to penetrate in vain. Upon these subjects we receive with profound gratitude any and every accession to our knowledge, which skill and genius can wrest from nature and impart to us. We hail with gratitude, as a benefactor to his species the man who discovers one general truth amid the multitudinous facts and appearances of natural things; with what feelings, then, ought we to welcome

the wonderful discoveries of revelation—concerning a world invisible, a state of things everlasting?

The doctrine of faith is, in no just sense, opposed to human reason; for the evidences for the truth of revelation are so ample, the proofs so cogent, that the most fervent devotee of *reason*, if he were consistent and true to his own principle, would be compelled to believe. The truth, however is, that man in no condition under which he exists is

That reasoning self sufficient thing,
That intellectual all in all,

which he is erroneously presumed to be by those who speak of reason as the dignity of our nature and the opposite of faith. Man has many other powers, principles, and tendencies, which reason cannot lay claim to nor embrace. Were we to attempt to guide ourselves by reason solely, we should not succeed,—for if that were possible we should not be men, but monsters of our species, new beings! Look at the ordinary manifestations and effects of the affections, at the laws which associate ideas in the mind, at that creative and moulding power, the imagination; look at these in their most healthy and controlled condition, and again as they are subjected to the perturbations and involvements infinite of human life, and then say how a scheme of religious belief and practice, which should touch no other faculty than reason, could be received and become influential? Indeed,

reason itself, like every other of our mental faculties, is subjected to a law of limitation which it has pleased our Maker to establish, in consequence of which it happens that when we reason most deeply and correctly upon certain truths, although we know the process is legitimately carried forward, and our premises are unexceptionable, yet we arrive at contradictions, at results, which appear to stand diametrically opposed to each other; and yet both are based upon right reason—both are true. There appears to be in these instances some defect in our nature, some inability to perceive an element essential to the perfection of reason, and to a correct judgment. This difficulty arises when we attempt to reconcile the prescience and power of God with the free agency of man, and in many other moral and metaphysical questions. It is precisely analogous to the limitation of our senses; for example, were a little additional power bestowed upon the eye, we should be able to penetrate into space without the aid of the telescope, or to *see* the wonders of the world of animalculæ, and the forms of the primary atoms of things, for the discovery of which we must now seek the assistance of instruments, or depend upon a train of abstruse reasoning.

But in all questions concerning facts which lie within our field of observation we may properly appeal to our experience; and as no one can deny that there are many men living in the constant exercise of the FAITH, we are competent to inquire.

in what manner they have become possessed of, and exercise this principle, upon the doctrines peculiar to the christian scriptures? Now experience teaches us that men do not receive the truth, and begin to exercise faith (as the theory of reason, which we are combating, would seem to require) by the rational process of discovering fresh, simple, elementary truths, and proceeding from them, step by step, accumulating by impregnable argument evidence upon evidence, proof upon proof, until conviction crown the whole. On the contrary, the usual process is that some stray word, some simple truth heard for the hundredth time unheeded, some passage of scripture catching the ear, or some affliction touching the heart, becomes a pivot upon which turns a total change in the intellectual and moral being of man. If we examine the texts, the thoughts, the events, which have been confessed by the most remarkable converts to have been the occasion of their first reception of the truth and exercise of the faith, we shall see how diverse they are from dictates of reason. Yet when their attention has been thus aroused to the great truths of the vicinity and personal agency of God, and their own deep moral responsibility, the exercise of all their powers, their reason especially, is excited in the most energetic manner, inasmuch as upon the correctness or incorrectness in the decision of the agitated question, is now felt to depend eternal interests.

“ Never yet did there exist a full faith in the divine WORD (by whom *light* as well as immortality was brought into the world) which did not expand the intellect while it purified the heart ; which did not multiply the aims and objects of the understanding while it fixed and simplified those of the desires and passions.” Christian men, when they have thus become acquainted with conversion, consider that they have sensible experience of a great scripture doctrine. They see that there is no defect in any of the links of the chain of argument which sustains the truth of Christianity, but that their former insensibility to its claims depended upon a disease inherent in their fallen nature, which obscured their vision, diverted their attention, and biassed their judgment, so that the sun shone, the charmer charmed, the alarum rang, the watchman warned them in vain ; and when the eyes of their understanding became enlightened, they attributed the effect to the same agency which primarily caused the light to shine out of darkness ; the Spirit of God moved upon the abyss of their hearts. When this faculty of judging rightly is thus imparted, although the vision is at first imperfect, and ‘ men are seen as trees walking,’ the subordination of the heart, the affections, and the reasoning powers to the principle of faith is gradual but effectual, for the key faculty is given,—the sun is risen and the clouds of error, the mists of prejudice, clear away. The mote in the intellectual eye being removed,

the true image and bearing of things come gradually forth and are apprehended. It is in accordance with these peculiarities of the human mind, and in reference to the channels through which truth reaches its innermost recesses, that the construction of holy scripture proceeds, not according to the order of a human system,—presents no orderly arrangement and distribution, but spreads out its treasures in rich and endless variety, in the same profuseness and immensity as the beauties and truths of nature. And therefore in every mood of mind, in every need of heart, appropriate matter may be found amidst its accumulation, of precept upon precept, line upon line, here a little and there a little, to awaken the sleeper, to arouse the inattentive, to kindle the light of life spiritual, and to impart knowledge, instruction, consolation, and correction, that all men may believe, and that the believer may be made perfect.

“As a skilful fowler, according to the different nature of his game, contrives and appropriates his stratagem, so God, knowing that some persons must be wrought upon by reason, others allured by interest, some driven in by terror, and others, again, brought in by imitation, hath, by a rare and merciful—and if I may so call it—suppleness of wisdom so varied the heavenly doctrine into ratiocinations, mysteries, promises, threats, and examples, that there is not any sort of people that in the scripture may not find religion represented in that form they

are most disposed to receive impressions from ; God therein graciously dealing with his children, not unlike the prophet that shrunk himself into the proportion of the child he meant to revive. The geniuses, the capacities, and the dispositions of men are so distinct, and oftentimes so extravagant, that there is scarce a passage of scripture that is not suitable or appropriate to some of those numberless differences of humour the Bible was designed for ; and in that unimaginable variety of occurrences shared amongst such vast multitudes finds not a proper object.”

Although doubtless the Scriptures, as the full and complete expression of the mind and will of God to all mankind, are most frequently the spring, and must and will be the food and sustenance of life spiritual in every man ; yet, nevertheless, the first pulse of that life is often awakened by impressions derived from nature, employed effectively by the same quickening spirit, who more ordinarily uses the revealed word of God. There is nothing in heaven or in earth out of his hands, beyond the sphere of his power ; the hearts of some men have been touched by the glory and beauty of earth and sky, the glorious scenes and shows of mountain and valley, the majestic sea,—that figure of the immensity of its Creator ; the beneficial arrangements of all natural things for the uses of man, or the surpassing skill displayed in the organic beings endowed with life, especially

in the mechanism of man's own body, that universe of marvels. The terror of the Lord in the stormy wind and tempest, the fearful collision of the elements and disruption of the earth's foundations, have all and severally been made the means of exciting men to seek a reconciliation with an offended God. The innumerable vicissitudes of human life, the very folly, vices, and crimes of men are frequent instruments in his hands, whose modulating skill brings good out of evil, to effect the purpose of man's salvation—"Surely the wrath of man shall praise thee, the remainder of wrath shalt thou restrain." The inconstancy of friends, leads us to that friend "who sticketh closer than a brother; the ingratitude or defection of our nearest and dearest relationships, excites us to seek that relationship to the UNCHANGING ONE, which shall enable us truly to feel him to be our FATHER in heaven. Even diseases, the first fruits, the inseparable associates, the established consequents and punishments of sin, become "angels and ministers of grace!"

Lord, with what care has thou begirt us round :

Parents first season us ; then schoolmasters

Deliver us to laws ; they send us bound

To rules of reason, holy messengers.

Pulpits and Sundays, sorrow dogging sin,

Affliction sorted, anguish of all sizes,

Fine nets and stratagems to catch us in,

Bibles laid open, millions of surprises.

Blessings beforehand, ties of gratefulness,
The sound of glory, ringing in our ears ;
Without, our shame,—within, our consciences,
Angels and grace, eternal hopes and fears.

But however numerous and diversified may be the means and occasions of conversion, human instrumentality chiefly is employed to propagate the faith, to bring before the minds of all men the necessary truths for their acceptance or rejection.

Let us then for a moment consider who are the persons entrusted with this duty, and in what manner it is to be discharged ; and this presents us with another most interesting point of conformity in Scripture with the requirements of our moral nature. Man is a social being, linked to his fellows by an irresistible law, bound in a stronger than material chain by his affections ; partakes of the impressions, sympathises with the joys and sorrows, and derives intellectual nurture from others around him. He is a dependent being, unable to subsist, much less to obtain enjoyment or happiness, without the sustaining and cherishing influence of others. The association of man into society, and the grouping of individuals into families, depend upon fixed laws of his being, and never did or could, as some speculators say, have flowed from his own will, or been the result of his own prudential calculations. In strict conformity with this part of our nature are the methods indicated for spreading the truths and propagating the influence of revelation.

For, in the first place, it is made a positive moral obligation to every man to instruct his own children in the knowledge, service, and true worship of God. Under the Patriarchal, Mosaic, Prophetic, and full Gospel dispensations, this obligation is equally urged as the test of personal obedience, the sure indication and offspring of a saving faith.

“He established a testimony in Jacob and appointed a law in Israel, which he commanded our fathers that they should make them known to their children, that the generation to come might know them ; even the children which should be born, who should arise and declare them to their children, that they might set their hopes in God, and not forget the works of God, but keep his commandments.” (Ps. lxxviii. 5, 6.) This point can scarcely be questioned ; but if it should happen that any parent who reads this is not aware of the extent of the obligation, let him compare this Psalm with Genesis xviii. 19 ; Exodus xii. 26, 27, and xiii. 8, 14 ; Deut. iv. 9, and vi. 7, especially, and xi. 19 ; Sam. iii. 13 ; Prov. xxiii. 13 ; Eph. vi. 4.

Secondly, It is equally plain that the same duty extends to a man’s household, and relatives, to his friends and neighbours, to whom he is bound to impart instruction and to use admonition—that they may know and fear the Lord. Jer. xxxi. 31, quoted at length Heb. viii. 11 ; Col. iii. 16.

Thirdly, The precept addressed by our Lord to his apostles and immediate personal followers,

“Preach the Gospel to every creature,” appears to be in some manner, and to a certain extent, incumbent upon all believers. But how, and with what restrictions, is it to be held obligatory? The full discussion and settlement of this question would lead into one of the most extensive, but least profitable controversies, which can engage Christians. A few remarks may excuse my own interpretation.

The very dawn of the Gospel was ushered in with the ascription of glory to God for the good tidings of great joy to *all* people; and one of its most prominent principles was to enforce the feeling of mutual brotherhood among all mankind, not by breaking the ties of nature, but by strengthening the bond of unity which was derived from Adam by the closer tie of our common relationship in Christ. How, then, can any believer escape the obligation to imitate the example of “Andrew, Simon Peter’s *brother*?” who, having himself seen and believed in the Messiah, findeth his own brother Simon, and bringeth him to Jesus. Does not the precept and example of our Lord teach us to regard all men as brethren?

Again, if the words of our blessed Lord at the institution of the Last Supper, “Do this in remembrance of me,” be obligatory on all believers, by what rule of interpretation can we restrict the precept, “Preach the Gospel to every creature, to any one class of persons?”

Under the Mosaic economy, the most solemn injunctions were given against any intrusion of those

unqualified by birth into any of the priest's offices, and instances are recorded where disobedience to this command was followed by signal and severe punishments.

But in the New Testament it is nowhere forbidden the unordained believer to teach; on the contrary, the exhortations to make known to all men the great salvation, are so intermingled with the precepts universally acknowledged to be obligatory on all believers, that on the supposition which would make what is called "*unauthorised* teaching," a sin analogous to that of Uzza,* whose unhallowed hands were laid upon the ark of God, it might be said, that the precepts of the apostles themselves were calculated to mislead us. The practice of our blessed Lord, in the case of him whom the disciples desired to be forbid to cast out devils in his name, and the blessing promised (Matt. v. 19) so comprehensively, "who-soever shall do and teach the least of these commandments," might suffice to establish this point. The precepts of the apostles in epistles addressed to whole churches, and to the general body of believers, (Jude 3,) abundantly prove that although certain orders of men were set apart to minister in holy things to the church, the privilege and duty of making known the truths, which concern all men, belong not exclusively to them. Nay, the apostle Paul affirms even that while some preach Christ from contention, envy, and pretence, yet he rejoices that in any way Christ is preached.

* 1 Chron. xiii. 9, 10.

It must also be admitted, that many things are designedly left to the discretion of particular churches, and if some have felt the expediency of limiting admission to their ministry, to those qualified by a certain course or a certain amount of secular learning, or by a readiness of unqualified submission to secular authority associated with the church's own government, experience has shown that the Gospel has not been restrained within any such artificial limits ; “ it has run a free course and been glorified ” by fruits so manifestly, so unquestionably, its own, that to deny the conformity thereof to the will of God, would be almost to deny his providential care, and to disbelieve the promise of our risen Lord to his true church, “ Lo, I am with you alway, even unto the end of the world ! ” I allude mainly to the body of great and good men unhappily ejected from our church on St. Bartholomew's day, 1662, to the influence of their writings, to the preaching and teaching of their successors, and their effects, under the blessing of God, upon the present state of our own church, and upon the cause of Christ throughout all the world. But in the absence of any positive or negative injunction upon this subject, we must seek, in the general principles of the sacred oracles, the guidance each individual may need for the fulfilment of his duty of proclaiming the Gospel. The apostle Peter says, “ As every man has received the gift, even so minister the same one to another, as good stewards of the manifold grace of God ; ”

this principle, although the apostle primarily applies it to the exercise of charity and hospitality, seems by the last phrase to be equally applicable to the duty of teaching. If then the qualification to teach be the rule and the limit of the obligation, it must apply to acquired powers, as well as natural abilities, to every especial acquisition as well as a general and endowed aptitude.

WHAT THEN IS THE DUTY OF A CHRISTIAN PHYSICIAN?

Upon him it is incumbent to become profoundly acquainted with nature in all its multitudinous and various parts, to know all existing things, the manner of their being, and the laws of their mutual actions and relations. The minister of the Gospel must throw the chief bearing of his studies upon the Scriptures, must investigate minutely the languages in which they are written, understand and apply profound principles of criticism in order to ascertain their meaning, and so bring their announcements, threats, and promises, to bear upon the almost infinite phases of the human mind and heart. In the infancy of the church, our various functions met, and were associated in one and the same individual, the knowledge of divers tongues the apostles and many of the first disciples possessed without the slow process of learning, and the gifts of healing by the miraculous agency of their Divine Master being superadded, attested the truth of their mission :—attested its truth and heavenly origin in the most happy and appropriate manner, (as the physician

more especially can truly feel and appreciate,) so different to that which would have been selected by man, prone as he is to be dazzled by meretricious splendour, and disposed rather to invoke fire from heaven at once to convince and to consume, than to exercise any redundancy of mercy toward his fellow-sinner. When it pleased God, in his infinite wisdom, to withhold his miraculous aid and sustenance, and to leave his truth upon the foundation of human testimony and reason, and his people to seek in the ordinary channels of study, labour, and human co-operation, the qualifications for every duty, it was obviously meet to separate the healing art from the ministry of the sanctuary. But may not the physician claim the especial privilege of being the minister and interpreter of nature in the service of the Gospel? To him, if he is to fulfil worthily his vocation, as well as to the teacher, is the aid of the [Spirit of God necessary. And his gracious presence is promised according to our necessities, but in the measure in which it is ordinarily bestowed at present, the brief term of human life does not suffice to qualify one and the same individual for both offices.

Yet so close and intimate is the connexion between the subjects which occupy the attention of both, that each ought to be familiar with, and to make frequent incursions into the provinces of the other. If men are to be persuaded by an exhibition of the ‘terrors of the Lord,’ may not the minister of the word profitably

inquire into the manner in which God has in nature dealt with sin, the method of his present judgments, the earnestness of that future and fearful condemnation which he urges men to shun, and the means and appliances employed in mercy by a gracious Father in the chastisement and correction, as with a rod, the disobedience of his beloved, though weak and erring children?

The scheme of God's moral government is formed in exact adaptation to man's moral nature; this so greatly depends upon his physical constitution, that a knowledge of the latter is essential to the full understanding of the former. The peculiarities of individuals, which render them more or less susceptible of the influence of certain motives, more or less touched by the same exhortation, more or less under the dominion of passions and prejudices, liable to be biassed, to be drawn hither and thither from the strait and narrow path which leadeth to life, depend, often in no small degree, upon their bodily organisation. The minister of the Gospel is the physician of the soul, and he ought therefore to know how often a melancholy train of sorrows and mental afflictions, dejection, fear, distrust of God, despair, and even the opposite states of feeling, exalted enthusiasm, rashness, over-excited joy, may depend upon causes in the body, which, to be remedied, must be treated as bodily infirmities. He cannot know too minutely or too much of human nature.

And is not an acquaintance with, and a cordial acceptance of christian truth, not merely a desirable, but an *essential* qualification for a truly sound and practical physician? Doubtless the Christian will acknowledge, that every man who has received the truth in the love of it, as it is in Jesus, is living in the fear of God, with a deep impression of his own personal responsibility and a humble dependence upon the Divine aid, cannot fail to fulfil worthily the duties of *every* vocation. But to him in whose hands are the means, instruments, and agents furnished by our merciful Creator, for the relief of pain and suffering, for the restoration from bodily and mental injuries, for the temporary suspension of death itself, and all its infinitely important consequences, it does appear indispensable, that he should possess no mean acquaintance with the truths of God's word, no slight regard to the souls of men, no coldness or indifference to their eternal interests. To no man is a pure, simple, and universal love of truth, of such vital importance as it is to a physician : and the christian physician has given, in the profession of the faith, a pledge, which will be received by every christian man, that he is a lover of truth, and that he will be urged by the most solemn and powerful motives to unbounded diligence in acquiring knowledge and to unwearied watchfulness against error. It is his daily and necessary avocation to explore some of nature's deepest recesses, to unravel her most mazed intricacies, to

search her most concealed treasures, and as the course of that duty is with

. . . “Siloa’s brook that flowed
Fast by the oracle of God,” . . .

a part of material nature lying nearest to his spiritual kingdom, may he not, by taking the word of God “as a lamp to his feet and a light to his path,” discover more concerning the principles of the Divine government and the attributes of Deity, than will be found by those whose engagements permit them to take but a cursory survey of nature’s more obvious features? May not the physician be able to give back to the Gospel itself a reflection from nature which shall illumine and illustrate some of its obscure lineaments? * With this honourable vocation, and with aspirations to do good, to suggest thoughts to the thoughtless, to comfort the afflicted, to cheer the weary, to present consolations to the desponding, yet unqualified by especial dedication to teach, is there any prohibition that a physician, as his abilities may serve, should obey the command of our Lord, the precept of the GREAT PHYSICIAN—“PREACH THE GOSPEL TO EVERY CREATURE?”

Were there no differences among men professing a knowledge of the truth, were all Christians agreed upon a standard of doctrine, and submitted to an universal authority in faith, it would be unnecessary

* See notes at the end of the chapter in illustration of this opinion.

to repeat the great truths of the Gospel, or to vary in any degree from the phraseology of the church. But it has pleased God, in his providence, with the design, perhaps to excite inquiry and to keep alive interest,—so to present his truth, that there may be a considerable variety in the manner in which men apprehend and express it— even although with much diversity they have that knowledge of the truth which is “unto salvation!”—Surely the great questions which divide Christians in opinion, need not divide them in charity! It yet behoves every man who feels how closely errors of opinion are allied to faults of practice, to bear his testimony to the body of sound doctrine, and to distinguish those designed differences from the fatal mistakes into which some unhappily fall.

It is the province of man, in the Gospel economy, whether in combined groups as in churches, for the guidance of others, or as individuals for their own spiritual benefit, to draw from the Scriptures theoretic expressions, systematic expositions of the Gospel scheme,—the remedial process therein provided for the great disease of sin. And, although possessed of no authority, and claiming no regard further than as it may be grounded on certain warranty of Scripture, it may have its uses, and may promote the great work of preaching for some of those whose minds are commonly exercised in discerning sure and false *in nature*, in pursuing, with a predominating love of truth, *human science*, to set

forth such a body of doctrine, as, with a humble reliance on the Divine aid, they may have arranged for themselves. The ministers of the Gospel appear to have no *exclusive* privilege for performing this service, and indeed it has not unfrequently been held that, exercised by others whose secular interests are not in any way involved, as is presumed of those who have subscribed to the Articles and enjoy the benefices of the church, there is an additional claim to men's attention. If men were influenced by reason and not by prejudice, there would be no ground for such an opinion ;—but following the example of the apostle, where no compromise of principle is involved, we may so far become all things to all men, that we may humour this prejudice, and listen complacently even to weak advocates of the truth,—if the truth itself do not suffer from their advocacy. A lay defender of our most holy faith must have great boldness—and we might almost say self-conceit—who should dispute the decisions of the church upon the great questions which it has deliberately pronounced upon, and declared essential to orthodoxy. A Christian will certainly not without long consideration, infinite pains and study, earnest prayer, and rigid self-examination, decide against the host of great and worthy names enrolled in defence of the orthodox faith. It is true that not a few, in their excess of zeal for the church, are ever striving to make “the appertainings and the ornaments” of religious worship, of equal importance and dignity

with “the faith” itself: thus exposing the citadel by spreading out their strength over indefensible out-works. It is too obvious to admit of dispute, that a vast diversity of opinions and doctrines, all considered within the limits of “the orthodox,” are expressed from the pulpits of the church; and this is an indubitable proof, that the church has left a very considerable area for the exercise of private judgment,—and necessarily for the private judgment of the *laity*; for unless preaching were altogether interdicted, opposing opinions and interpretations diverse, or even inconsistent, must be constantly presented to the worshipper; and if from the pulpit he turns to the writings of the clergy, he will find no greater uniformity. A thinking man is therefore compelled to seek some other standard and rule for his guidance and reference; and the great reformers of our church,—whom to know is to revere,—have happily directed him, and appealed themselves, to THE HOLY SCRIPTURES. Here, then, is the anchorage of Faith, to hold us secure amid the storms of controversy;—the rudder to steer us amid the intricate passages of learned commentators and disputants;—the compass to guide us to the desired haven. And here, too, we may derive the impulse, which shall carry us on, ever exploring and acquiring new treasures, from even earthen vessels, in which it has pleased God to deposit them. To drop metaphor, the Christian who adheres most closely to the written word of God for his faith, his

hope, and for the promotion of his charity, will be the most ready to seek diligently, and receive gratefully, the aid to be derived from other christian minds, whether of ancient or modern times, (and where is there such a group as reformed the English church?) for the true interpretation and understanding of the Scriptures, But he will also beware of placing himself in bondage to any fallible man, or set of men, not able to manifest their divine authority by miracles, as the apostles could and did.

From these considerations, and in this spirit, the following summary of christian doctrine is ventured, chiefly and primarily to introduce the discussion of the principles upon which the theology of nature should be studied, and afterward to elucidate the phenomena and laws of physical disease, and of remedies, as a part of nature, from whence many interesting truths may be deduced concerning the Divine Government.

NOTE A.—Page 66.

The following examples illustrative of the opinion in the text,—that physicians may serve the cause of truth by bringing their own peculiar studies and qualifications to elucidate points of theology,—are also so interesting in themselves, and so apposite to the design of this work, that no apology seems necessary for this extensive note.

The first instance I shall adduce of services rendered to theology by medicine, is from Dr. John Freind's History of Physic. His remarks upon the writings of St. Luke appear to me peculiarly interesting, not only for the important considera-

tions they suggest respecting the extent and manner of the supernatural aid rendered to the inspired historians generally, but as furnishing us with a glimpse of the personal feelings of this eminent disciple and companion of the apostles, the BELOVED PHYSICIAN, who was the instrument chosen for communicating to the Christian Church, the most vitally important truths concerning her blessed and divine Master.

“ St. Luke’s Greek,” says Dr. Freind, “ comes nearer to the ancient standard than that of the other evangelists. For though St. Luke has some mixture of Hellenisms and the Syriack phrase, yet the reading the Greek authors while he studied physick made his language without dispute more exact. His style is sometimes very flowing and florid, as where he describes the voyage of St. Paul. St. Luke indeed, in his profession as a physician, and no doubt because he was one, when there is occasion to speak of distempers or the *cure* of them, makes use of words more proper for the subject than the others do. Many instances of this might be given; I shall content myself with one or two. The person seized with a *palsy* is here with great propriety called παραλελυμένος,¹ but by St. Matthew² and St. Mark³ παραλυτικός, a word never used by the ancient Greek writers. The woman who had the *issue of blood*, is described by St. Mark,⁴ as παθοῦσα ὑπο πολλῶν ἰατρῶν καὶ δαπανήσασα τὰ πάρ’ ἐαυτῆς παντα, καὶ μηδὲν ὠφεληθεῖσα, ἀλλὰ μᾶλλον εἰς τὸ χεῖρον ἐλθοῦσα. St. Matthew⁵ omits all these particulars; but St. Luke, though he does mention them, gives them quite another turn, and softens the passage very much in regard to his faculty, and instead of relating how much she *suffered* by the several physicians, or how she grew *worse* upon her remedies, he says only that her distemper was above the reach of any of them to remove it; οὐκ ἴσχυσεν ὑπ’ οὐδενὸς θεραπευθῆναι.⁶ And you may observe, that when he comes to speak of the charges the woman had been at, he uses a very proper expression, προσαναλώσασα, whereas the word δαπανήσασα, used by St. Mark, properly signifies *spending* only in a *riotous* and *luxurious* manner; and so St. Luke applies it⁷ in the case of the *prodigal* son. Thus in setting down the

¹ v. 18.² ix. 2.³ ii. 3.⁴ v. 26.⁵ ix. 20.⁶ viii. 43.⁷ xv. 14.

cure of the same woman, St. Matthew says only ἐσώθη; St. Mark, imitating the Hebrew phrase, expresses it by ἐξηράνθη ἡ πηγὴ τοῦ αἵματος: the language of St. Luke is more simple and more correct, as well as more *professional*, ἔστη ἡ ῥύσις. When our Saviour *healed* those that were brought to him, of their diseases, the expression in St. Matthew is διεσώθησαν,⁸ and in St. Mark ἐσώζονται;⁹ but St. Luke uses the word that is peculiarly proper for healing,¹ ἰᾶτο πάντας. So when St. Matthew says the Centurion's servant was *cured*,² St. Luke tells us, that they found him not only *recovered*, but ὑγιαίνοντα,³ *in perfect health*, which shews the cure still more effectual. In like manner, in describing the young maiden that was raised from the dead, upon our Saviour's speaking the word, he says,⁴ ἐπέστρεψε τὸ πνεῦμα, which he puts in, no doubt, as being the *first sign of coming to life*. The same accuracy of expression, he observes, in regard to the *lame*.⁵ It is remarkable, that St. Luke is more particular in reciting all the miracles of our Saviour, in relation to *healing*, than the other evangelists are; and that he gives us one history,⁶ which is omitted by the rest, that of raising the widow's son at Nain."

And to this I may add, it is most remarkable and instructive, that St. Luke, the Physician, was the only appointed historian of the miraculous conception, and the minute particulars respecting the birth of the Emmanuel, which it pleased God should be known. A Physician only can appreciate how forcibly the omission of all speculation in that narrative, bears evidence to its truth.

NOTE B.

The thirteenth chapter of the book of Leviticus is occupied by a copious description of many cutaneous diseases, to which it appears the Hebrews were subject on their quitting Egypt; it constitutes, in short, a medical treatise in the book of the law. Its immediate and obvious purpose was the accurate discrimination of such of those diseases as were contagious, in order to the

⁸ xiv. 36. ⁹ vi. 56. ¹ vi. 19. ² viii. 13. ³ vii. 10.
⁴ viii. 55. ⁵ Acts iii. 7. ⁶ vii. 11.

prompt separation of infected persons from the community, and their isolation probably in lazarettoes prepared for the purpose. Among these diseases the leprosy was pre-eminent for its malignity, incurableness, and the distress and suffering it entailed upon the affected. The separation of the leprous was absolutely necessary for the public good, and the greatest care was required lest those who had other diseases of a milder kind, and not contagious, should be excluded from the camp, and suffer with them. The instructions delivered by Moses in this treatise were designed to guide the priests during the whole period of the existence of the Hebrew nation: and could it have been possible that any error were involved in his descriptions, the evil resulting would have been enduring and incalculable. An examination of this portion of Scripture, with a view to ascertain the extent of knowledge possessed by Moses upon a purely medical subject, required an accomplished physician. And if it were found that the Hebrew was strictly correct, it would, from this point, furnish an argument for the authenticity of his mission, and it would further illustrate the application of the types found in this passage to the Great Antitype of the law. For all things written in the Book of the Law, had, according to the testimony of an apostle, a reference to the spiritual things of the Gospel.

Accordingly, we find not only that our *English* translators, great and learned as they indeed were, did not know enough of medicine to render, with adequate accuracy, the *medical* treatise of Moses, but that the translators of the Greek Septuagint *also*, missed its truly scientific minuteness and correctness. Dr. John Mason Good, from combining the required acquirements of a critical knowledge of Hebrew and its cognate languages, with his professional lore, has rendered this service to Biblical criticism.

He says—in his *Study of Medicine*, vol. iv., article Leprosy—that the description of the cutaneous *efflorescences* and *desquamations* by Moses is admirable and exact. The species of LEPROSY described are three in number, to all which the *generic* term BERAT (כְּהַרַת) is applied, that one species—BOAK, (כְּהַק) characterised by a dull white colour, is not contagious, and therefore did not render a person unclean. That the two other spe-

cies, termed TSORAT, (צֶרַעַת) venom or malignity, (whence the Greek word *psora*, and our English *sore*,) were both highly contagious, rendering the person unclean, and making it necessary to exclude him from society. The Arabic and Greek writers on medicine, minute and accurate as they generally are, confound both the *terms* and the *symptoms*, and sometimes consider leprosy contagious and sometimes not. Moses tells us that the priest shall examine the *Berat*, and if it has the *specific* marks which he accurately indicates—it is a *psorat*, and the person is to be pronounced unclean. The Greek version confounds the *specific* with the *generic* descriptions; and reads—the priest shall examine the leprosy, and if it have the specific marks, it is a leprosy. The two kinds of *psorat* are also accurately distinguished in the Hebrew, into the dark or dusky, (*psorat cecha*,) and the bright, or glossy white, (*psorat lebena*,) both of which were contagious, and rendered the person unclean, although the latter was much more severe than the former. Moreover, both these kinds of leprosy, but especially the worst kind, the *glossy white*, sometimes occurred as acute diseases,—that is, having a definite course accompanied by fever,—and having run that course, although severe and covering the whole body, terminated, without passing into the chronic or permanent form. This was contemplated by the Hebrew legislator, and he therefore gives clear directions for distinguishing it, and for ascertaining the proper moment, on the one hand, for pronouncing the patient clean; or, on the other, for ascertaining that the chronic form was established, and that he must be pronounced permanently unclean.

But as many skin diseases, not essentially leprous at their commencement, were liable to be developed into leprosy, or to have its infection engrafted upon them, Moses was called upon to describe these; and he provided that all persons so affected should be examined by the priest, by his test, and whilst any doubt remained, whether the case were infectious or not, should undergo a temporary seclusion of seven days; and even then, as the true character of the eruption might not yet be manifested, seclusion for another seven days was to be imposed, at the expiration of which the disease sufficiently disclosed itself, and the sufferer was pronounced clean, and set at liberty, or unclean, and rejected from the camp.

The skin diseases described for this purpose in Leviticus xiii., according to Dr. Good, embrace,

1. Saat, herpes, watery tetter, or *vesicular* diseases ; 2. Saphat, *dry scall*, sealy tetter ; 3. Netek, *porrigo*, humid scall, or *pustular diseases* ; 4. Berat, *leprosy* ; 5. Naga, (literally *a touch* ;) *Papulæ*, spots, bruises ; 6. Shechin, boils ; 7. Me-eutash, carbuncles.

To this admirable exposition of Dr. Good, (somewhat modified here,) I must add, that after careful examination of all the systems proposed for arranging skin diseases, I am convinced that they are seriously defective, and therefore often practically mischievous, and that we greatly need one which shall avoid all their errors ; and is it not extremely probable that this arrangement of the great Hebrew prophet and philosopher, although thus incidentally set forth, may be the true and natural system ?

Some critics have imagined that it must have been a great hardship to be shut up seven or fourteen days for every attack of skin disease, and therefore propose a new reading of the words, “ shut up,” making it “ bind up,” inferring that the priest merely covered or bound up the eruption. Dr. Boothroyd, Bishop Law, Pilkington, and others, have supported this reading. But there seems to me no good ground for altering the authorised version. It would be of little importance, even in these days of activity and business, to shut up for seven days every one who has a suspicious skin disease, although we have no fear of leprosy.

NOTE C.

The following is from Dr. N. Wiseman’s “ Twelve Lectures on the Connexion between Science and Revealed Religion.”

“ In attempting to establish the unity of the human race,” says Dr. Wiseman, vol. i. p. 262, “ we found ourselves involved in a variety of physiological speculations, and had to unravel the action of natural causes upon the physical organisation of man. This would seem to conduct us to medicine, however strange it may appear to you.

“ You will probably ask, what light the progress of medicine can throw upon the truths of religion ? Not much, per-

haps, if we consider it as an aggregate of principles, varying in different schools, as a succession of theories most conflicting among themselves, and not often referred to any illustration of sacred doctrines. But in particular cases, in the examination of individual facts, where science has been first invoked by the adversaries of revelation, a fuller and more learned discussion, based exclusively upon scientific principles, has done the work of confutation more effectually and more satisfactorily than the mere theologian could have achieved it. I will select one example in which superficial medical observation has been applied to the denial, and afterwards more solid learning to the complete vindication of an important portion of the christian evidences.”

Dr. W. goes on to justify himself, in bringing before his hearers objections to christian truth, on the ground that a vague and indefinite impression that learned men have found reasons to reject it, is more mischievous than a full exposition of their objections—which generally turn out flimsy enough, and easily refuted.

“The point alluded to, as attacked by superficial observers, is no other than the truth of our Saviour’s resurrection. As St. Paul holds this for one of the principal grounds of our faith, the enemies of Christianity have left no art untried to shake this foundation stone of our belief; and this most directly by endeavouring to throw doubts upon the reality of our Saviour’s death. Modern unbelievers have imagined that our blessed Redeemer could not have died on the cross, but must have been taken down in a state of asphyxia, (suspended animation, trance,) in which state he was placed at the disposal of his friends, who medicate his wounds with spices, and leave him in the well-sheltered sepulchral chamber. There he recovers, and returns to his friends. They pass over the difficulties of evading his vigilant enemies, and suppose the spear inflicted but a superficial wound. It was fitting that the science which had been enlisted in opposition to religion, should be brought to throw off the odious imputation and refute the objections brought from its own pretended principles.

“Several eminent writers had occupied themselves with the physiology of our Saviour’s passion (if we may so express ourselves) before this method of attacking it had been resorted to—

Scheuchzir, Mead, Bartholinus, Vogler, Triller, Richter, and Eschenbach. A more scientific investigation has since been made by the two Gruners,—father and son. They have collected all the medical analogies to establish the character of our Saviour's sufferings, and the reality of his death.

“The torments of crucifixion were in themselves fearful, not merely from the outward wounds inflicted, the inflammation surrounding them, the painful posture of the body,—but also from the effects of this position upon the circulation and other functions of life. The pressure upon the main artery or aorta, must (according to Richter) have impeded the free course of the blood, producing a great congestion in the lungs and right ventricle of the heart, ‘more intolerable than any pain, and than death itself.’ ‘This frightful bodily suffering was superadded to the anguish of mind produced by the overpowering burthen of our sins.’ This upon our blessed Lord’s sensitive frame, after a night of torture and restless fatigue, after wrestling with mental agony until it produced a bloody sweat, with the shame and ignominy of the cross, and its attendant circumstances. The wound in the left side, inflicted from below by the robust arm of a Roman soldier with his short lance, must by itself have inflicted a deadly wound.—Dr. W. here adds the consideration, (and refutation of the objection that the Greek word *νυττεῖν* signifies rather to wound superficially,) that our Saviour distinguishes the wounds in his hands from that of his side by desiring Thomas to measure the former by his finger, and the latter by the insertion of his hand. (John xx. 27.) This, therefore, must have been of the breadth of two or three fingers, on the outside. But for a lance, which tapered very gently from the point, to leave a scar or incision on the flesh of such a breadth, must have penetrated into the body at least four or five inches,—a fatal wound under any circumstances.

“But Dr. Christian Gruner has shown that the words used by St. John to express the wound inflicted by the lance, are often used to denote a mortal one. He proves, that even in a state of syncope or trance, the least loss of blood would have been fatal; and the spices or unguents used in embalming, and the close chamber of the tomb, “would be the most secure instruments for converting apparent into real death by suffocation. Besides, no

case of syncope could possibly last so long as our Lord lay entombed.”

I cannot conceive any medical sceptic in this country so ignorant of a branch of medicine, to which attention is now very properly given in every course of education, namely, Forensic medicine,—as to revive these neological notions here. The Gospel narratives must be rejected altogether, or the reality of the death of Christ admitted.

Dr. Wiseman greatly underrates medicine, if he supposes it to be no better than “an aggregate of principles varying in different schools.” On the contrary, it now embraces a vast amount of natural truths, and well established principles of the very highest importance to the welfare of mankind. And I trust it will hereafter be often employed to “illustrate sacred doctrines.”

CHAPTER III.

SUBSTANCE OF CHRISTIAN DOCTRINE.

ARGUMENT.—Divinity of Christ, supported by incontrovertible evidence, and illustrated by nature—The Trinity—Redemption—State of man—Grace—Propriety of treating of these themes, and our duty to dwell on them constantly—How we are to understand the doctrine of original sin—Justification by faith—Bishop Hall and Hooker on justification and sanctification—Spiritual influences, supported by analogy of nature, and involving motives for personal exertion—Union of believers with Christ—Doctrine of election—Christian morals.

§ 1. THE chief, the foundation of all Revelation, is the *Divinity of our Lord Jesus Christ*. To every man who comes to the study of the Scriptures without prejudice, this great doctrine must present itself “emblazoned on their front and forehead.” Nevertheless, there are those who would assent to the divine origin of the Scriptures, at least to their general truthfulness, and who finding no flaw in the historical evidence, admit their supremacy over all uninspired literature, and yet deny the doctrine that

God was in Christ, otherwise than *He* was in the prophets and apostles, or than the Creator (who is over all blessed for ever) dwells in his most favoured and exalted creatures. Now, it is evident that this great question between opponents who occupy the common ground of confidence in the Scriptures as depositaries of truth, can only be determined by patient critical investigation of the words and phrases which appear clearly to express the fact, (wonderful as it may be and is,) that God himself tabernacled among men.

In pursuing this inquiry, it behoves us to listen with serious attention to every possible objection which may be urged by the utmost ingenuity and skill, and derived from the deepest learning and most acute logic. Happily, however, conviction comes to the bosom of the humble by a very short and easy process; but for the truth's sake, the most elaborate and laborious critical investigations have been pursued. A library would scarcely contain the labours of the great and good men, who have therein exercised their talents. All that can be done here is,—not to offer reasons,—not to sum up the evidence,—but to express my *own* settled conviction,—having followed, not superficially or slightly, the masters of those methods of seeking truth, that a charge of ignorance, presumption, yea, of absurdity, against the unconvinced impugners of this doctrine, must be pronounced proven. And from this sentence no appeal

which they may make to philosophy, reason, or the nature of things, serves in the least to save them. Nay, the suggestions of nature, the drift of every analogy, the constitution of human nature, everything, in a word, which can bear upon the subject, within our mental grasp, supports the orthodox conclusion. In the sequel it will be shown in what manner the doctrine of the Deity of Christ harmonizes with *certain truths in nature*; at present it is only asserted to be a fact stated upon the authority of the Scriptures.

Now as this is the arena, upon which the strife has passed—concerning the plurality of the Divine nature—most men, when convinced of the Godhead of Christ, admit the co-equal and co-eternal excellence and nature of the Holy Spirit. It is true that the Scriptures contain no direct assertion, no explicit logical formula of the latter truth, but by implication in a thousand expressions, which, on the supposition of the opposite theory, would be inexplicable or deceptive, we are led to believe that God, the Father, the Redeemer, and the Sanctifier, are distinct, and yet one only and true God.

The church in all ages has adopted expressions beyond those of the Scriptures, to convey most readily to men's understandings the true idea of revealed truth;—*Trinity* to express the unity, and *Person* to designate the several distinctions implied in the scripture phraseology. And it must be considered by every ingenuous mind but a captious objection to

the use of these terms, which is taken from the derivation of the first, and from the signification of the word person, when used in ordinary discourse. It is necessary, as we well know, in almost every branch of science, and more especially in moral or metaphysical science, to adopt colloquial expressions, and adapt them by definition and restriction to the purpose of our reasonings. Hence, surely we may properly rest satisfied with these terms, to express those great and all-important verities.

When we have thus apprehended and become convinced of the great truth of the Divine nature of Christ, what unspeakable importance attaches to the history of his mortal sojourn? A meaning must be involved in every word and every action recorded of him worthy of God? Thus, we must admit a *primâ facie* probability, that that interpretation of the evangelical narratives which involves the utmost dignity, and implies the profoundest relations to the human race, must be the true. And thus with the apostolical writings, as commentaries we discover that the incarnation of the eternal Word flowed from the infinite love of God to his apostate creatures—that the sufferings and death of this wondrous Son of Man were endured in our stead and to redeem us from the state of alienation from God—to make a propitiation and atonement for sin—a vicarious sacrifice acceptable to God—to furnish a means of reconciliation—to open anew an intercourse between God and man! And his life was occupied in teaching

the principles of duty now obligatory upon creatures, once lost but now redeemed, to be performed toward God in the new relationship of A SAVIOUR, and their fellow-men as partakers of God's redeeming mercy and love—additional to that which they owed to Him as their Creator, and to them as their fellow creatures. Whilst the perfect example of a perfect human being, (performed in illustration of his teaching, and for an abiding standard for our reference and guidance, with spotless purity of heart and motive,) no less stamps him with the character of the *Christ*, the Son of the living God. This truth, confirmed by his resurrection and ascension, becomes the basis of our religion, and the substance of our faith.

§ 2. *State of Man.*—If from the contemplation of the Divine Being, the revelation of his will, the spirit of his requirements and claims upon us which reason and feeling alike recognise as holy, just, and good, we turn to take a view of man himself, we must acknowledge, with deep awe and humiliation, the utter depravity and inherent sinfulness of the whole human race. The whole history of mankind, the observation of every passing moment in every place, under every condition, the study of our own hearts, if honestly and candidly pursued, must convince every one of us, that in ourselves by nature there dwelleth no good thing. And as the state of man is entirely sinful, so it is, as far as his own power extends, utterly helpless and hopeless. “*Dead in*

sin," is the scripture language ; the most forcible and perfect expression of entire inability on our part to escape from the penalty wherewith we are threatened. But God, in infinite love and boundless benevolence, provided the means to redeem, to re-animate, to restore his fallen creature, and accepted the great sacrifice,—the sufferings and death of the incarnate Son of God, as an atonement for the sins of the whole world. The provision, and the acceptance, of the propitiation must obviously be ascribed to the free grace and unmerited favour of God. It has pleased him to require from us, as the primary condition of our salvation, the means and occasion of applying that atonement, of obtaining the benefit of that propitiation,—the exercise of faith. If justified before God, man can be justified by faith alone—he cannot obtain justification by any works of righteousness, by any moral conduct, by any act, sacrifice, or merit of his own. From faith itself all merit is by its very nature excluded, and it is also the free gift of the unmerited favour of God. No good thing can be done at any time by man of himself, but the spring and source of all good in the human heart is the Spirit of God, by whom sanctification is wrought in the heart, justified by faith ; i. e. a tendency, a bias toward good, a holiness of nature is imparted, and efficient aid rendered in escaping from the power of evil by the indwelling Spirit of God. *Instrumentally*, it is faith which is the source of all obedience to God's holy, moral law, constituting good works, faith

working by love. We believe in the goodness and loving-kindness of God, we believe that he has accepted for us personally, the atonement wrought by the death of the Son of God, we therefore love him supremely, and as the evidence of our gratitude, we obey him implicitly. This is the end of faith, the basis of true morality, the spring and substance of all good actions.

Such, in a few words, is the Gospel scheme of salvation by Christ through faith. Every part of which not only bears to be dwelt upon and expanded, but demands our constant study and meditation. So far from thinking that books may be too much multiplied upon it, that too much may be written or said, we consider that with a humble dependence on the divine aid, with the written word of God, as our guide or guard, we may for ever dwell upon the wondrous theme, we may, with the holy angels, desire to look into and upon it, in every aspect of which our faculties are capable, and to clothe it in as great a variety of expressions as our language allows. We are exhorted to “walk about Zion, and go round about her, tell the towers thereof. Mark ye well her bulwarks, consider her palaces, that ye may tell it to the generation following. For this God is our God for ever and ever, and he will be our guide even unto death!”

Innumerable questions have arisen, touching the very root and foundation of the whole matter, or bearing most important relation to the character

and conduct of the believer, and it is the duty of every Christian, as God has given him ability, to exercise his mind in rightly apprehending upon which side, in these great questions, the truth of God is to be found, that he may be able to give to every one that asketh a reason of the hope that is in him. We should throw contempt upon the word of revelation did we rest satisfied with indolent acquiescence in the truths we may happen to be taught, without searching out the grounds and sanctions thereof, while we are giving our best exertions and endeavours to determine disputed points in science, or to settle doubtful questions in national policy. The supreme question to every man, doubtless, is his own personal state in the sight of God, whether he be in the faith or not; and next to that stands the wondrous things of God's law, his gospel, and his ordinances.

Besides, if we really belong to the christian church, we belong to a body militant; warring against error in every form, and against adversaries exceedingly subtle, who carry on their attacks into her very bosom and innermost recesses, and we are exhorted to put on, for the conflict, the whole armour of God, a complete panoply, both offensive and defensive, having for its first and chiefest stay and dependence, the girdle of truth, and for a weapon of offence the sword of the Spirit, which is the word of God.

§ 3. *The doctrine of human depravity, so hum-*

bling to men's pride, so fatal to all hope of obtaining salvation by our own merits, will, of course, be repudiated by those who deny the divinity of Christ, and the efficacy of his obedience and sacrificial death : these doctrines must stand or fall together. But will it be objected to by any one who studies mankind, unprejudiced against the inferences to which its admission leads ? We think not ; for it is not contrary to that doctrine that we find some good in almost all our fellow-creatures ; the restraining grace of God's good Spirit, modifying and overruling the total evil of man's own nature. The wills and affections of sinful men are so governed, that good to his people results from the worst forms of evil. Upon the belief of human depravity no practical severity toward our fellow-men can be rationally founded, seeing that all are in the same condemnation ; and it is HE, whose tender mercies are declared to be over *all*, who makes us to differ.

§ 4. *Justification by Faith*, the great foundation of our hope and the glory of the Gospel, involves many considerations deeply interesting to us ; and if rightly understood and accepted, it lays the axe to the root of innumerable shoots of error springing from the irrepressible desire of the human heart to *do* something towards man's salvation—to escape from the demand made of an entire and unconditional surrender of all the affections to the sovereign Giver of all grace, and to have somewhat left for self-gratulation and worship. If man, before con-

version, be indeed “dead in sin,” he is desirous of believing, after his acceptance into Christ’s church, that he has acquired power to atone for his subsequent delinquencies, by penances, by personal sufferings; to deserve somewhat for his works of benevolence, his splendid gifts to God’s house, his liberal distribution of alms, his fasts and lengthened services of worship. He strives most earnestly for the admission of *some* merit, even although with Lot pleading for Zoar he may urge the humbleness of his self-righteousness, “Is it not a little one?” He will not allow, that even if the foundation be laid, the whole superstructure of his hope, even to the top-stone, must be the work of grace,—grace, free, unmerited, and alone.

Thus this doctrine suffers from the injudicious and imperfect believer, whilst the *world* cherishes a suspicion that it weakens the foundation of morals, and tends to a loose interpretation of practical precepts. This suspicion excited the indignation of the apostle, (Romans iii. 8,) and it is not difficult to show by reason that it is altogether unjust and unfounded, and to prove that the only security for a perfect morality, the only adequate motive, and therefore the only reasonable expectation of righteousness, is to be found in the doctrine of free pardon for the sinner through faith in the sacrificial death of him who loved us and gave his life to redeem us from the curse to which sin had subjected us.

As it is of such incalculable importance for us to entertain just views upon this subject, and there are many indications that opinions inconsistent with the true foundation of faith are industriously circulated and unwarily adopted amongst us at the present time, we need not apologise for the introduction here of the views held by two highly distinguished ornaments of the church. The deviation from the ‘old paths’ into the bye ways, where these guides would now lead us, appears at the point of departure to be so slight, that many are passing into them, from the straight and narrow path that alone leadeth to life.

“Is it the main care of our lives and deaths, what shall give us peace and acceptation before the dreadful tribunal of God? what but righteousness? what righteousness or whose? ours? or Christ’s? ours, in the inherent graces wrought in us? in the holy works wrought by us? or Christ’s, in his most perfect obedience and meritorious satisfaction wrought for us, applied to us?” The Romish church, and many sects of Protestants, are “for the former, we are for the latter. God is as direct on our side as his word can make him. Everywhere blazoning the defects of our own righteousness, the imperfection of our best graces, the deadly nature of our least sins, the radical sinfulness of our habitual concupiscence, the pollution of our best works; everywhere extolling the *perfect* obedience of our Redeemer, the gracious application

of that obedience, the sweet comfort of that application, the assurance and unfailableness of that comfort, and lastly our happy rest in that assurance.” “ The scripture is clear ours, so is all antiquity ; so would they be all if they had grace to know God, themselves, grace, sin, heaven, hell : God perfectly just ; themselves miserably weak ; grace sensibly imperfect ; sin immeasurably sinful. Lastly, if they knew that heaven is for none but the pure, hell for the presumptuous. O Saviour ! no man is just through thee, but he that is sanctified by thee ! What is our inherent justice but sanctity ? That we aspire towards, we attain not to. Woe were us if we were not more just in thee, than sanctified in ourselves ! We are sanctified in part, according to the weakness of our receipt ! we are justified thoroughly according to the perfection of thine acceptation ! Were we fully sanctified here we should be more than men, were we not thoroughly justified we should be no more than sinners before thee, and whilst we stand before thee as sinners we can have no peace. Let others trust in the chariots and horses of their own strength, we will remember the name of the Lord our God.”*

“ There neither is, nor ever was, any mere natural man absolutely righteous in himself ; the mother of the Redeemer herself is not otherwise loosed from the bond of ancient sin than by redemption ; if Christ has paid a ransom for all, even

* Bishop Hall.

for her, it followeth that all, without exception, were captives. If one has died for all, then were all dead in sin,—all sinful therefore, none absolutely righteous in themselves; but we are absolutely righteous in Christ. Christ is made to us wisdom, justice, sanctification, and redemption. Wisdom, because he hath revealed his Father's will. Justice, because he hath offered up himself a sacrifice for sin. Sanctification, because he hath given us his Spirit. Redemption, because he hath appointed a day to vindicate his children out of the bonds of corruption into liberty which is glorious.

“How is Christ made the righteousness of men? There is a glorifying and a justifying righteousness of men in the world to come, as there is a sanctifying and a justifying righteousness here. The righteousness wherewith we shall be clothed in the world to come, is both perfect and inherent. That whereby we are justified is perfect, but not inherent. That whereby we are sanctified is inherent, but not perfect.”

“Doubtless,” saith the apostle, “I have counted all things loss, and judge them to be dung, that I may win Christ, and be found in him, not having my own righteousness, but that which is by the faith of Christ, the righteousness which is of God through faith.” (Phil. iii. 8.) The error of the Romish church, in which it is followed by certain sects of Dissenters, and to which certain influential writers of our own church are tending, is, that they make justification depend upon a divine quality inherent, “they make it a righteousness which is in us. If it be in us,

then it is ours, as our souls are ours, though we have them from God, and can hold them no longer than pleaseth him, for if he withdraw the breath of our nostrils we fall to dust. But the righteousness wherein we must be found, if we would be justified, is not our own, therefore we cannot be justified by any inherent quality. Christ hath merited righteousness for as many as are found in him. In him God findeth us if we be faithful, for by faith we are incorporated into Christ. Then, although in ourselves we be altogether sinful and unrighteous, yet even the man, who is impious in himself, full of iniquity, full of sin, him, being found in Christ, through faith, and having his sin remitted through repentance, him God upholdeth with a gracious eye, putteth away his sin by not imputing it, taketh quite away the punishment due thereunto by pardoning it, and accepteth him in Jesus Christ as perfectly righteous as if he had fulfilled the whole law. Shall I say, more perfectly righteous than if himself had fulfilled the whole law? I must take heed what I say, but the apostle saith, ‘God made him to be sin for us who knew no sin, that we might be made the righteousness of *God* in him.’ ”*

§ 5. *Sanctification*.—“Now concerning the righteousness of sanctification, we deny it not to be inherent; we grant that unless we work we have it not; only we distinguish it a different thing in nature from the righteousness of justification. We are righteous the one way by the faith of Abraham,

* Hooker.

the other way, unless we do the works of Abraham, we are not righteous. Of the one St. Paul, ‘ To him that worketh not but believeth, faith is counted for righteousness ;’ of the other, St. John, ‘ He is righteous which worketh righteousness.’ Of the one, St. Paul doth prove by Abraham’s example, that we have it of faith without works ; of the other, St. James, by Abraham’s example, that by works we have it, and not only by faith. St. Paul doth sever these two parts of christian righteousness in Romans vi. : ‘ Being freed from sin, and made servants to God, ye have your fruits in holiness, and the end everlasting life.’ Ye are made free from sin, and made servants unto God,—this is the righteousness of justification. Ye have your fruit in holiness,—that is the righteousness of sanctification. By the one we are interested in the right of inheriting ; by the other we are brought to the actual possession of eternal bliss ; and so the end of both is everlasting life.

. . . . “ The more we have our fruits unto holiness, the more need we have to crave that we may be strengthened and supported. . . . If we could say we were not guilty of anything at all in our consciences, (we know ourselves far from this innocence, we cannot say we know nothing by ourselves,—but if we could,) should we therefore plead not guilty before the presence of our Judge, who sees so much further into our hearts than we do ourselves ? If our hands did never offer violence to our brethren, a bloody thought doth prove us

murderers before him. If we have never opened our mouths to utter any scandalous or offensive word, the cry of our secret cogitations reaches the ear of God. If we did not commit the sins which daily and hourly, either in deed, or word, or thought, we *do* commit; yet in the good things which we do how many defects are intermingled! God in that which is done respecteth the mind and intention of the doer. Cut off, then, all those things wherein we have regarded our own glory, those things which men do to please men, and to satisfy our own liking; those things which we do by any respect not sincerely and purely for the love of God, and a small score will serve for the number of our righteous deeds. Let the holiest and best thing we do be considered,—we are never better affected unto God than when we pray,—yet when we pray how are our affections many times distracted; how little reverence do we show unto the grand majesty of God, unto whom we speak; how little remorse of our own miseries; how little taste of the sweet influence of his tender mercies do we feel! Are we not as unwilling to begin, and as glad to make an end, as if in saying *Call upon me*, he had set us a very burthensome task?

“Not one action since the fall of Adam,—from any man hath proceeded pure and without stain or blemish. The best things we do have somewhat in them to be pardoned; how, then, can we do anything meritorious or worthy to be rewarded?

“ *We acknowledge a dutiful necessity of doing well, but the meritorious dignity of doing well we utterly renounce.* We see how far we are from the perfect righteousness of the law; the little part we have in holiness, it is, God knoweth, corrupt and unsound; we put no confidence in it at all, we challenge nothing for it; our continual suit to God is, to bear with our infirmities, and to pardon our offences.” *

But although the christian man may never hope in this life to *attain* to perfection of moral character,—an entire merging of his will and affections into God’s holy will,—it is toward this state of perfection he is ever to *aspire*; he must with sincerity of purpose be ever progressing onward, “with face Zionward,” daily and hourly striving to become perfect, ordering all his thoughts, words, and actions, upon the principles of God’s holy law—so clearly set forth both in his word, and in the living example of Jesus Christ; indulging and cherishing a joyful hope of the completion of this vast enterprize only when death shall usher him into the kingdom and presence of his glorified Lord.

§ 6. *Spiritual influences.*—The evil of man’s own heart, which has its spring and fount in his very nature, inherited with his bodily weaknesses and predispositions to disease from his sinful forefathers, as life flows on is augmented into a stream, and oft-times swollen into a torrent by evil acts performed, and evil habits contracted, by his own personal choice.

* Hooker.

And the descent is made easy, the downward tendency urged by the agency of Spiritual Beings, who in rebellion themselves against the holy sovereignty of God, mysteriously act upon the mind of man, involving him in error, and upon his heart promoting all wickedness, until he is merged in the gulf of eternal ruin. To resist this tendency and escape this ruin would be impossible, were man not assured of efficient aid in his time of need from the same Being who makes known his danger, and warns him of his secret adversaries. If the strong man armed keeps the house, a stronger than he is ready at our call to subdue and release us from his thralldom. The Spirit of God, as our faith in the Holy Trinity assures us, becomes an indweller in our hearts, to aid us in the mighty struggle, and vouchsafes to us the assurance of his presence, not by any supernatural manifestation, but by the success which shall attend our own earnest endeavours, by the consciousness we possess of a growing conformity to the divine likeness, and by the increasing vividness with which we realize the hope of a happy consummation, even our eternal salvation and blessedness.

It is not, then, any fond conceit, any questionable proposition, for the true believer to allege that we cannot enter upon this course of moral progress until assured of the free, unmerited forgiveness of sins, for the sake alone of Him who has paid the penalty due,—made atonement for the sins of the whole world. At every moment of our course must we abandon

all hope of success, if we cannot realize a belief that “the blood of Jesus Christ cleanseth from *all* sin.” Once assured of our justification through faith in the Redeemer, we shall with *hope* pursue that holiness, without which no one shall see the Lord. It is thus that the doctrine of justification through faith is the basis of christian morals. “I will run the way of thy commandments,” says the Psalmist, “when thou hast enlarged my heart.” The faintest exercise of true faith opens up to us a course of moral discipline, in which it appears impossible to advance one step without a confidence of pardon for the past, and experience has taught every believer his inability during its progress to attain to the perfection and holiness of God’s law. Who is there that must not exclaim, “I have seen an end of all perfection, for thy commandment is exceeding broad?” comprehending as it does every thought, word, desire, and action. Who does not *need* the strong tower of justification through faith in a Saviour’s righteousness and redemption, to which he may continually resort?—and who can say that the fullest and freest offer of acceptance with God through faith in the Redeemer, disposes him to carelessness, or lowers his standard of moral excellence and practical holiness?

The doctrine of a contest of spiritual agencies in the innermost recesses of our nature, mingling the effects of their presence with the offspring of our own powers, and manifesting their presence by results of which alone we are conscious, is not contradicted,

but is rather confirmed by the investigations which have been instituted into our natural faculties, inasmuch as all such investigations as have penetrated beneath the surface of things, have encountered mysteries quite inexplicable without revelation; and if revelation has not in every instance solved these mysteries, it has placed them upon a basis conformable to our enlarged experience, and has shown them to be consistent in analogy with things more intimately known. If, indeed, we compare spiritual truths with those facts in nature which men are at great pains to apprehend clearly by reason of their connexion with present interests,—such as the physical properties of the metals, the laws of the expansion of bodies by heat, water, and steam, and the like,—we shall *seem* to know the latter directly, and without that mystery in which the former are necessarily shrouded. But the mental and moral part or parts of our constitution, investigate them as diligently as we may, present many mysteries equally dim with revelation, yet *they* are a part of nature, which must be received as truths, influencing and impelling action. Thus, it has never been satisfactorily determined, although the attempt to decide it has occupied most powerful minds, what is the exact foundation of *right* and *wrong* in the nature of things; nor can it be discovered by what precise power or process in the mind these are apprehended, obvious as it is that men universally *have* the apprehension of them with more or less distinctness. But in the

revealed will of God, and in the life and character of our blessed Lord, we are furnished with such an exemplification of righteousness, and in the doctrine of the indwelling Spirit of God, such a certainty of our just apprehension of it, that the simplest heart, the least informed mind, need not err in the inquiry, nor miss the truth, so far as it is at all necessary to determine choice or to guide practice. In the employment of our own powers we are exhorted to be vigilant, to exert them to the uttermost; never relaxing our own best endeavours by reason of the supernatural aid we may receive; for we do not know in any case the precise limits to our own abilities, and at what point the divine aid is vouchsafed; nor can we exactly determine where our own sinful nature and where satanic influence predominates in temptation. Were it otherwise, faith would be annulled, and our dependence placed upon sense.

§ 7. Again. The doctrine of a spiritual union of the believer with Christ, mysterious as it is,—is, nevertheless, not more mysterious than is the unity of mankind in Adam, our derivation from him of a sinful nature, and from our immediate ancestors of mental qualities, moral dispositions, tendencies, and bodily diseases. To superficial observation, we may seem, in this life, independent individuals, like the monads of Leibnitz, or the points of space surrounded by a repulsive sphere, imagined by Boscovitch to be the basis of physical atoms; but a little inquiry shows us that our bodily individuality con-

ceals ties, connexions, interminglings of being, most mysterious, although certain and recognised under some name by all men. In like manner, a positive, although spiritual, union between Christ and the true believer exists, and may be easily apprehended. It is distinctly affirmed by our blessed Lord himself and by the apostles. By Him it is alleged to be analogous to the mysterious union of the Persons in the blessed Trinity. And to convey the true meaning thereof adequately to our apprehension, it is compared to many instances of intimate union, coming within the province of sense. Thus it is said to be as the vine and its branches; as the body, to its head; as bread taken for nourishment, to the body nourished; and as the union in the marriage state. Figures obviously intended to illustrate a real union, constituting Christ and the whole company of believers *one spirit*.

§ 8. *Election*.—The seventeenth Article of the church, so clearly and explicitly states the doctrine of Predestination, the subject has been so elaborately, so extensively discussed, that it is almost impossible to say anything which can throw any light upon the subject; yet we would in a few words observe that the analogy of the physical government of God supports the orthodox faith. Let us look at the distribution of temporal blessings, wealth, birth, mental endowments, health; and then say what, but the will of the sovereign Disposer of all events determines who shall possess them. Let us look at the

current of our past lives, and reflect how much we have ourselves exercised the power of self-government, and how much we have been by a superior power impelled into the channel which accorded best with his own will.

How is the absolute sovereignty of God,—the *fact* of Election,—to be reconciled with human freedom of choice and responsibility? We confess we know not, but that the two facts are perfectly consistent, we may by faith distinctly apprehend; our reason tells us that the decrees of God must be absolute, his power illimitable, and that we cannot withstand his will. On the other hand, our own consciousness tells us we are free to do or to forbear the things we are commanded or forbidden, and we thus are fairly responsible for our choice. Looking exclusively at one side of this paradox, some have reduced man to a mere machine, guided in every minute act and thought by the power of God. As we act from motives, they have argued as if motives act upon us, as one material body acts upon another—that the impulse felt to commit a sin, is like the tendency to the earth of a projectile, and makes the end equally indifferent. How far this is from the truth, we need not *reason*, we may *feel*. The paradox is involved in many passages of Scripture, as if there was no inconsistency in the truth of both facts, as if God's sovereignty, according to election and reprobation, may stand with man's free will, freedom of choice, and perfectly just responsibility.

This is, indeed, implied in the whole of our Lord's teaching, in his wonderful sorrowing over Jerusalem, his malediction upon Capernaum and Bethsaida, taken in connexion with such assertions as that in John vi. 44, "No man can come unto me except the Father which hath sent me draw him."

The apostle Peter says to the crucifiers of our Lord, "Him being delivered by the determinate counsel and foreknowledge of God, ye have taken, and by wicked hands have crucified and slain." And again, in his epistles, "Use all diligence to make your calling and election sure." In the epistle of Paul to the Romans, wherein the absolute sovereignty of God in election and reprobation is so forcibly set forth, where its most astonishing, most cheering, and most alarming consequences, are all distinctly avowed, the apostle does not set it against man's freedom of choice, or liberty and responsibility, but, on the contrary, he actually urges it as a motive to induce men to exercise that freedom. "If God spared not the natural branches, take heed lest he spare not you. Behold, therefore, the goodness and severity of God, on them which fell severity, but toward thee goodness, if thou continue in his goodness, otherwise thou also shalt be cut off." In 1 Cor. ix. 27, he admits that even he himself might, if he continued not in the practice of holiness, be in the end a castaway. Thus it would appear that both sides in this great controversy are right, though neither is *exclusively* right. The church maintains

the doctrine of election,* and yet sanctions in her services innumerable expressions, seemingly inconsistent with it, and has hence incurred much censure, at various times, from both contending parties. How unjust that censure, how consistent with Scripture, and the deepest and truest views of man's nature, this is, will appear to those who study most earnestly the subject, and shackle themselves least with mere human dogmatism. We may be assured that we are addressing our Father in heaven, according to the mind of the Spirit equally, when with united hearts, in the congregation, we pray—"that it may please thee to have mercy upon *all men*;" and when committing our brethren to the dust, we beseech Almighty God shortly to accomplish the number of the *elect*, and hasten his kingdom.

CHRISTIAN MORALS.—In the second chapter we have spoken of faith as a principle of the human constitution, by which we apprehend truths beyond the limits of our other powers—truths for which we can have no direct sensible evidence, and which experience can never teach us. The brief consideration we have given to the great doctrines revealed in the holy Scriptures, has in every instance brought us to this channel and ground of their reception. It might be demonstrated with more clearness and precision than any other metaphysical truth, that perfect morality as respects our dealings with other beings, and perfect holiness as respects the motives

* In the seventeenth Article especially.

which actuate us, would necessarily flow from the influence of the truths revealed to us, if this influence were at all times permitted to be consistent, and exactly such as in strict reason it ought. These truths are termed in the aggregate by an oft-used metonymy, *The Faith*,—the manner of receiving being put for the object received. This in the Scriptures constitutes a body of doctrine and a code of morals; and for the purpose of supplying motives, explaining processes, and directing moral aims, it is as to purity perfect,—and as to comprehension, complete.

Whatever may be thought by moralists respecting the perceptions of right and wrong, whether we are endowed with a moral sense, or whether reason, utility, or self-love is the principle upon which the distinction of good and evil is felt by us, it must be admitted that knowledge, to an extent far beyond our own power to attain, is essentially necessary for the perfection of moral character, i. e. for the production of the goodness of which we are, as men, capable. The arguments for a moral sense are, perhaps, the most cogent. If so, this sense, or faculty, like our other senses, must require the guidance of our reason, or appearances will be constantly mistaken for realities, and actions flowing from its decision will be mischievous and oftentimes fatal. In the use of our eyes how often do things appear which we know (our knowledge being previously derived from other sources) do not really exist. So it is with our moral sense: guided by its impressions alone, we could never approve for instance,

of one man's depriving another of his limbs by a violent and painful process; but when experience has taught us, that by the operation of amputation skilfully performed we may save life, we are called upon to approve it and to act against the internal feeling. The perception of right and wrong by the moral sense, moreover, does not necessarily impel us to choose the right and reject the wrong, to follow in our consequent acts its dictates; choice and will to do are different to the reception of a sensation. Thus by the eye we perceive light and darkness, by the ear harmony and discord; but the *choice* between these is not the act of the eye or ear, and if therefore our perception of right and wrong is so far analogous to this mode of receiving impressions as to be termed a sense, we must not confound it with the will or the bias to good or evil which depend upon other principles. If the other theories of moral perception be preferred, if it be supposed that we know right from wrong only by a mental process, by reason, the same faculty by which we know truth from falsehood, or by testing actions by their tendencies relative to our own personal interests, (selfishness,) or to their more general bearings, (utility or expediency,) in any case, the force of the argument is not lessened. Knowledge beyond our own powers to attain is necessary to guide our choice and determine our acts.

The moral sense of mankind, then, in order to

lead to perfect conduct, will require truth, and that complete and at all times ; whereas from the first moment of its exercise, in consequence of man's fallen nature, he is misled by error, so that if there were no bias inherent in the heart to choose evil and reject good, (which, alas, there is !) false notions would be imparted by education, and where *actions* were *felt* to be wrong, they would be represented to him to be good ; and where the moral sense presented them as good, he would be persuaded that they are evil. But apart from the love of evil, human knowledge is so limited—embracing but a moment in eternity, a grain of sand, a drop of the ocean of truth,—that we cannot determine the quality of actions, not even in all cases to the extent of pronouncing them good or evil, and almost never their *relative* quality. Hence it is that the code of morals coming from ONE whose knowledge is perfect, will present many articles in relative prominence not easily comprehensible by us, and will differ from every code of morals emanating from men. It is thus the Scripture manifests itself to be from God. Its moral code, while it exalts, corresponds with the most enlightened conscience,—whilst no man ever existed insane enough to say he would wish to alter an iota of it in judging the actions of others toward himself,—presents certain articles in a way which is perfectly peculiar, for which no legislator nor moralist (upon his own mere human principles) can ever

give adequate reasons, and which stand strongly opposed to the principles, and condemn totally the practices, of the world. Thus in its root and branches the system of christian morals differs from every human theory. What ancient philosopher in his scheme ever made moral sentiment dependent upon faith? and yet what other basis can it have? To determine the moral nature of an action, we must know its relation to mankind present and future; and if man survives the grave this knowledge must extend to eternity. How can we attain this but by faith? “Faith is the evidence of things not seen,” as well as the substance and reality of things hoped for. When our blessed and adorable Lord was asked, “What shall we do that we might work the works of God?” he answered, “This is the work of God? that ye believe on him whom he hath sent.”

It might be shown by the experience of ages that the morality of individuals and of nations has ever been regulated by and dependent on their religious belief. No instance can be adduced where the simple dependence upon the moral sense has determined the choice and guided the practice of a man into holiness and justice. Opinions derived from an external source have moulded the character, and the impression of the divine character and government, as far as it has been known, or according to its presumed nature, has been reflected in the moral nature of man. That the only real and true information we possess respecting God is

in the christian Scriptures, we hold as proven ; and in the wonderful extent to which they have opened the invisible world, the depths of human nature, and the tendencies of moral action, lies the basis for moral theory, and the impulse and guide to moral practice. Whilst in the Scripture there is no lack of precept and positive injunction, save upon a few subjects where most cogent reasons may be discovered for their omission, it is chiefly by supplying motives, and presenting living examples to be copied, that their influence is brought to bear upon the moral character of man. These motives present some remarkable features, and to speak of them in language borrowed from physical nature obliges us to appear paradoxical. Thus, although we seem to be able to analyse them, to exhibit them separately, they are never separable, and it may be said of them that they mutually contain and are contained in each other. If there be one which may claim to be the first and the most eminent, it is the redeeming love of God. “ God so loved the world, that he gave his only begotten Son, that whosoever believeth in him should not perish, but have everlasting life.” In this is implied every possible motive to holiness and righteousness which can influence the mind and heart ; and the whole superstructure of religion and morals must rest upon this as a corner-stone. The incarnation of Deity, the doctrine of providence, man’s responsibility in a future state, yea, the simple fact,—when

authoritatively announced,—of a separable soul annexed to our material organisation, contain within them, in necessary union, every element of moral influence. Hence we find the whole sum and substance of duty both to God and man concentrated into a single precept—and that precept referring to the mode of our reception of truths revealed, not directly to any action to be fulfilled. “Believe in the Lord Jesus Christ,” and the *result* of a simple, but true and unsophisticated faith here, is expressed in the promise annexed to the precept, “and thou shalt be saved.” It is indisputable that the reception of this truth, and fulfilment of this precept, and all that is implied therein, would suffice to perfect the character in holiness and righteousness. The pardon of past transgressions removes all apprehensions which would obstruct immediate and future endeavours. The sovereignty and infinite love of God in Christ would preclude all worldly fear, and satisfy us that no injustice to our fellow-men, no limit to our devotedness and love to our God and Saviour could possibly be admitted. We should at all times and in all things do perfect justice to others in every relationship; justice modified only by mercy and tenderness toward their shortcomings. Every failure, every action not up to the standard of absolute perfection, is a proof of defect in our faith. Every act of injustice toward others implies a disbelief in God’s sovereignty; every anxious thought about worldly

matters, a distrust in him who has said, “ I will never leave thee and never forsake thee”—and so of every element of morality. Our prayer to him who is able to aid us must therefore ever be, Lord increase our faith ! and the eternal and immutable fitness of moral purity of motive, (holiness,) and conformity to the divine law, of actions, (righteousness,) become manifested by the inseparable results of faith. “ The work of righteousness shall be PEACE, and the effect of righteousness quietness and assurance for ever !”

CHAPTER IV.

ON THE STUDY OF NATURE FOR TRUTHS RESPECT-
ING ITS AUTHOR AND GOVERNOR.*Natural Theology.*

“As we must necessarily take all our ideas, as well as our language, from the sensible world, as we are taught that it is a glass in which things spiritual are purposely but darkly shadowed forth, and as physical science is naturally subservient to mental, and both are but handmaids of religion, I deem that we outstep not the bounds of true philosophy when in the glorious works of the Almighty we humbly trace a confirmation of his word.”—J. P. CORY.

ARGUMENT.—On the study of nature for theological truth—
Defect of natural theology as at present understood—Inquiry
whence it derived the doctrine of the Divine Unity—In nature
are many suggestions of plurality—Instances—Directions for,
and examples found in Scripture of the proper study of nature
in order to elicit truths respecting God and divine things—
The principle that nature is to be studied in the light of reve-
lation, applied to the doctrine of an incarnate Deity, which is
shown to be exactly responded to in nature and essential to its
true interpretation.

HAVING in the preceding chapters slightly
glanced at the evidences for the truth of revela-

tion, the faculties by which we apprehend and receive its doctrines, and having attempted a brief summary of these according to the view of a christian physician ; it appears now necessary to inquire generally in what manner NATURE is to be studied for the purpose of eliciting such truths concerning God and divine things as may be found therein, in order to obtain correct principles to guide us in our research into the medical sciences, whence we would bring some contributions to Natural Theology, and moreover disclose some of the ways, and display some of the attributes of the GREAT PHYSICIAN !

Natural Theology is at present in a state the least satisfactory of any of the many branches into which human knowledge is distributed. It is not advancing, nor are its foundations and principles accurately defined nor even well-indicated, it is shut up within a narrow and altogether erroneous boundary,—a limit fixed without any just reason. In those treatises upon natural theology which have obtained notice, and they are numerous, little else has been attempted than the illustration of one truth, namely, the being of a God, and the deduction of such inferences as nature everywhere affords concerning *His* personality, power, wisdom, and goodness. Its success within this limit has certainly been signal. If any man should doubt the existence of ONE supreme being, or should confound his being with the active powers of nature, arguments irre-

sistible, proofs innumerable are furnished to refute his atheism, and to clear his confusion,—to render Pantheism irrational. Every hypothesis which would account for the phenomena of existing things without the supremacy of one infinite mind, it utterly annihilates, and it surveys all nature and gathers from every quarter instances of wise design, of benevolent purpose, and of power, unfathomable to the human faculties. Nevertheless the key-truth of natural theology, the highest and greatest truth with which the human mind is conversant—the UNITY OF GOD, was not discovered by man from the study of nature, but was originally imparted to him by a supernatural communication, that is, a revelation from God himself. This is an historical fact of primary importance. By some persons, indeed, it is tacitly denied, and they are accustomed to speak as if GOD had been *discovered* by human reason and by contemplating his works ; although I know of no writer who has attempted to assign to any individual or to claim for himself the merit of *any* discovery in natural theology. But those who have admitted the source of its key-truth to be *revelation*, have lost sight of the importance of such an admission, and they have failed to draw from it many practical consequences, which upon even a cursory glance must necessarily follow.

The principles upon which natural theology is founded, the mode of its procedure in inquiries proper to its objects, the *logic* of the science, (as

some would express it,) depend so immediately upon this point, that it may appear surprising that it should not have been long since discussed and determined.

The chief obstruction which now lies in the way of the onward progress of natural theology will be removed if we can prove, that discovery, in the strict sense of the term, does not come within its province, and that the great truth of the unity of God which it has hitherto been its chief aim to illustrate has been derived from an extended source.

Two inquiries arise immediately from this discussion ; first Whence did men derive the great truth of the existence and unity of the Supreme Being ? And, secondly If this truth had not been transmitted from ancient to modern times, would men have discovered it in the present state of science ?

The first is simply an historical question, and in the entrance upon the inquiry, we might take for a text, and it would be also our conclusion, that “in the wisdom of God the world by wisdom knew not God.” The evidence for the support of this fact is both positive and negative. We find an ancient and remarkable people in possession of this truth, at a period of such remote antiquity, as to be antecedent even to the existence of every nation whose records have reached us.* The general intellectual character of that people renders impossible the supposition that they had discovered it in the investigation of nature ; their own annals and the

* Records of Creation ; Bishop of Chester.

general consent of the whole nation refer its origin to a divine and supernatural communication. This is an intelligible and perfectly reasonable mode of accounting for their possession of it, which can be said of no other hypothesis whatever. But was it known, and by what means was it ascertained, by the ancient Heathen philosophers?*

There were amongst them men who had extensively explored nature, deeply studied the human mind, and knew better than any who have succeeded them the sphere of reason and the metaphysical difficulties arising from the peculiarities, powers, and limits of our faculties. Did they discover the existence of one supreme and only God? Assuredly not. The one amongst them most conversant with nature, and perhaps the greatest, ARISTOTLE, perceiving the resemblance borne by many things in nature to contrivance and design, derived from thence,—that is, from the consideration of final causes,—a notion of something like an intelligence, a mind, a mover, in *union* with material things; a soul, as it were, of the universe. The other philosophers who had a glimpse of the truth in question seem to have derived it from some obscure tradition, as they vaguely spoke of one supreme Being who was infinitely beyond the reach of man's conceptions, and transcendently above the superintendence of human affairs. The use they made of such dim notions as they did possess, sufficiently evinces that they

* See Note A. at the end of the chapter.

were not worthy to be termed knowledge. How indeed could they be assured that in some of the unexplored regions of nature evidence of the existence of many gods would not be discovered? They saw in the gods of the populace, the mere creatures of fiction, personifications of abstract human qualities, good and bad; and they had sufficient good sense to reject all belief in their existence, unless indeed of such as were deified heroes, of whom, however, it could not be supposed they had any power over nature. They might perhaps from hence have derived a suspicion that there did exist some kind of spiritual being unseen who possessed that power; but they could not possibly *know*, they did not even conjecture, that the Creator and Sustainer of all things is the ONE only living and true God; that “the Lord our God is one Lord.” (Deut. vi. 4; Mark xii. 29.) Their knowledge of the laws, processes, and existences in nature, was too limited to enable them to decide for us this great question, which had it been left to man’s own investigation would not have been established until natural science had greatly advanced. But this rather belongs to the second head of our inquiry, which is,—

Whether the key-truth of natural theology would have been discovered even at the present time, if we had not received it from a source extrinsic to science?—whether man’s unaided faculties could have reached it by exploring nature?

It is common for those who are unwilling to incur the odium of absurdity which attaches to atheism, and yet are anxious to escape from the claims of Christianity, to assume that the unity of God is discoverable in nature, and is, and has been known for ages by the unaided exercise of man's own faculties. Painful it is to confess that many writers on natural theology, albeit devout Christians, have allowed this fallacy to remain unexposed, have been contented to rest upon a view of the matter which the enemies of revelation rejoice in, and instead of disclosing to us, from the truths of nature the *ONE only living and TRUE GOD*, have lent their assistance in setting up the dumb idol of Deism ! Whereas it may, I conceive, be satisfactorily proved that if *any reference whatever* to any other than physical causes,—any speculation concerning spiritual existences or agencies,—were permissible in modern science, and we had pursued such an inquiry unrestricted by revealed truth, and guided solely by reason, we should have concluded for the existence of a *plurality* of gods. In other words, nature, with unaided reason, and according to the principles of science now pursued, would have led the human mind to some kind of Polytheism. It might indeed be questioned whether the human mind, in its present condition, be not totally incapable of making any discovery out of the sphere of nature, material and mental ; whether any knowledge whatever, concerning disembodied

spirit, spiritual existences, agencies superior to man, or (*à fortiori*) concerning *God*, on mere natural principles, could consist with modern science. Let us dwell upon this point for a moment.

The process which has been so successfully employed in the investigation of nature, and has erected the vast structure of modern science, is essentially the same, whatever may be the difference among the various phenomena and existences which it embraces. The appearances of the heavens, the nature and operations of those subtle elements which can scarcely be regarded as material, namely, light, electricity, and heat, the composition and properties of the grosser matters of our globe, which we can weigh, and measure, and handle, the laws and actions of living bodies, the mysterious life which animates them, the mind itself, the subject as well as the object of science, all and each of these are studied, if successfully, on the same plan and by the same process. The principles and limitations of this plan and process have been fully understood and adhered to only in modern times, and its success has arisen as much from excluding from the sphere of inquiry every object not properly within the limits of the human faculties, as from its positive advantages. Before the process of induction had been explained and defined, some of the greatest minds, the most acute and brilliant faculties were dissipated and wasted in the pursuit of

mere *ignes fatui*. Men speculated upon the possible or probable qualities of things and beings of whose *existence* they had no evidence. The first principle of the inductive philosophy forbids the assumption of any existence of which we have no proof. It teaches us to observe diligently all the phenomena around us, to create phenomena where our power extends, (by experiment,) to refer every phenomena where we are able to its immediate cause; to associate similar facts, and observe carefully their points of identity or resemblance, (that is, to generalise,) with the view to discover the general laws prevailing amongst many related things; to seek for those physical causes which have a wide or universal range, to mark their extent severally, and to trace back again their effects in the production of particular phenomena. This is the essence of the inductive philosophy. Where in this process is the point at which we may admit spiritual agency? It is true that when we have discovered a group of phenomena, not referable to any law, not explicable or not associated by any physical cause, we are allowed to frame an hypothesis, to take a supposition as a stepping-stone to a true theory,—as a guide to direct our inquiries, and by which to test our instances. But would any hypothesis be admitted for a moment which implied the interposition of an invisible and voluntary agent in the production of any group of physical appearances? Assuredly not! We are enjoined by the strictest rules to frame no

hypothesis even, which is not based on a *vera causa*—a cause which is manifested in *some* place and in certain instances at least, as operative and efficient,—and after being assured of its existence, to take it with us hypothetically to test its efficiency in the unexplained cases which we are seeking to elucidate.

It may, however, be alleged, that after proceeding in our investigation of causes, and carrying our generalizations up to the highest and most extensive physical laws, the mind passes on to a first and *spiritual cause* by another step in the same process of induction which led us to infer causes of any kind not directly cognisant to sense. Such an assertion requires but to be examined to be refuted. If the agency of the Deity be denied in the simplest instance of gravitation, in the fall of a leaf, is it more evident when we see the extension of the law to the planetary system; or when we proceed still further, and carry the same law to the explanation of the appearances in the stellar heavens, and see new systems of worlds formed and forming by the gravitation of diffused nebulous matter? To this wonderful elevation has modern astronomy reached! The opinion of La Place is, that we remove further from us the proof of the existence and agency of God, by this extension of the law of gravity. We obtain no clearer evidence of a supreme mind, on the contrary, (he maintains,) we dismiss him from the universe. We see indeed a very simple affection of matter,—a tendency in

separate atoms or masses to approximate,—working out in a vast scale, embracing heaven and earth, the most mighty results! and can we discover by *the study of the phenomena* whether that property of matter be inherent in its nature, or has its origin from mind, and therefore imposed?

Again, to take the simplest case of chemical phenomena, the affinity or aptness to unite between two simple bodies, two elementary substances, say between iron and oxygen, the well-known metal and a constituent part of the atmosphere. These substances unite only in two proportions, forming oxydes; but they are easily separable by the agency of another body having a greater affinity for the oxygen than iron. These properties of this metal are of the greatest importance to the existence of living beings, and to the progress of the human race in knowledge; but can we discern whether they are essentially and eternally inherent in its nature, or imparted by a spiritual agency?

Let me not be misunderstood; my allegation is, that the unity and personality of the Supreme Being was not originally, and probably would not have been in the present state of science discovered by man, would not have been made out by reason, and consequently would not now be recognized, had it not pleased God to reveal himself,—a favour to our species, which, no one can doubt he would have withheld, had such been consonant to his designs. But since he has, by supernatural communication

to man, made known his existence, and displayed therein his attributes of goodness and wisdom, the same can be seen in everything in nature; *His* agency is now visible in the heavens, they declare *His* glory; in the earth and all its contents, they are *His* handywork; “there is no speech nor language where their voice is not heard,” declaring his existence,—now that their language is interpreted, proclaiming his goodness and his providence. And his living energy and power are manifested in every force of nature, and in every pulse of life! The revelation of his existence and personality is an illumination around and upon nature, whereby we can perceive him in the least as well as in the greatest of his works; in every blade of grass, in the curious and elaborate fabric of the human body, in the laws of inorganic matter, in the constitution of the human mind, “the inspiration of the Almighty giveth him understanding!”

Hence it is that in opposition to Atheism and Pantheism, natural theology takes its arguments and illustrations from any part of nature indifferently; and if it had no other aim than to exhibit design, and to prove the power and wisdom of the Creator, (as has been well said,) “a single example seems altogether as conclusive as a thousand, and he that cannot discover any traces of contrivance in the formation of an eye, will probably retain his atheism at the end of a whole system of physiology.”

In like manner precisely, after the extent and

universality of the law of gravitation was discovered by Newton, its agency could be seen in, and illustrations of it could be derived from the fall of every leaf in the forest, the vibration of every wave of the ocean, the phases of the heavens, or the formation of a dew-drop. Now we are able beyond all contradiction to name the discoverer of this law, to fix accurately a period when men knew it not, and when they first became acquainted with it. But can we do this with respect to any truth concerning God, and say such an one made this discovery? We think not. The language of the apostle in the first chapter of Romans, verses 19, 20, seems at first sight to imply that God could be discovered in nature by men's unaided researches, and this meaning many suppose it to bear, and adduce it to prove; but a closer examination of the passage will show that it makes no such assertion. It simply asserts that when the existence of God had been shown to man by revelation, his eternal power and Godhead, i. e. supremacy and claim to adoration and worship, are abundantly displayed in nature.

If then, natural theology has derived its chief truth from revelation, and has refuted every possible objection of the infidel derived by him from nature against that great truth, what else has it accomplished? Nearly forty years ago it was said, by a writer already cited, "that the chief value of those publications that aim at establishing the being of an intelligent Creator by a copious induction of

the marks of intelligence in the Creation, consists either in the subservience to the pleasures of a devout meditation, or in the novelty, arrangement, and importance of the physical truths they contain." This description exactly applies to every recent treatise on this subject. But why should natural theology be shut up within this narrow limit? Do we thus deal with any other of the physical sciences? Suppose there were many persons professing scepticism concerning the Newtonian theory, how would they be treated? Should we in deference to them confine all our philosophy to the search for instances of one law of nature, and consider all the apparent exceptions and modifications of it only in reference to their disbelief? We might certainly make such a complete exposition of nature for one simple purpose be subservient to much interesting remark and contemplation, and pass in review many facts in all the sciences. But so limited a purpose to our researches would never be acquiesced in for a moment; on the contrary, all nature is scrutinized for its facts, and *every* inference of cause, law, or relation, is diligently brought forth and carefully recorded, whether it has any direct practical application, or serves merely to indulge a speculative curiosity; and it has so often happened that discoveries which appeared at the moment most trivial and useless, have afterwards unexpectedly become of so great practical importance, that men have almost ceased to ask, even in

the most unpromising instances concerning natural truths, *Cui bono*? Indeed, it would at present be considered mere impertinence for a sceptic to attempt any obstruction to physical science on the ground that he could not perceive its uses or foretel its tendencies!

It is, however, evident that natural theology has been restrained and paralysed by these, or other equally erroneous principles. It has limited itself to the field where the enemies of revelation are the least indisposed to meet it, silently acquiescing in the false assumption, that man's own reason made the great discovery of its key-truth. It has chosen to take the light of revelation but to the *entrance* of the dim labyrinth of nature, and then to cast it away; attempting to explore it in darkness, it has (to drop metaphor) taken one truth and despised others of equal value, from the same source, and resting upon the same authority. Hence it has been found necessary to slur over innumerable facts in nature, standing, however, prominently forth, and which, to unaided reason, would impeach the goodness, wisdom, or power of the God of nature; to evade the consideration of the indications which, without the revealed truth of the Unity, would have led us into Polytheism; and to leave untouched matter pregnant with vast interests and combinations, which unravelled, would reveal invisible mysteries and disclose man's destinies. The theology of nature properly studied would be found precisely the

same as the theology of the Bible. All evil and confusion, touched by the sword of the Spirit, the word of God, would take its true form, nature, and front, like the reptile in Eden at the contact of Ithuriel's spear. To bring the truths of revelation properly to bear upon nature, would, without doubt, be attended with results similar to the effect of polarized light upon those minute transparent beings termed monads. The transparency of these minute globules, as seen in common light, had led to the impression that they were perfectly homogeneous, and consequently the simplest form of matter endowed with life. Many ingenious reasonings proceeded upon this ideal simplicity; it was even thought we had at length discovered in them a clue to the mysterious origin of living creatures, which might be all built up by a congeries of these the elements of life. All such speculations were put to flight at once, when that newly discovered modification of light was thrown upon them, and it became manifest they contain within them an elaborate mechanism as difficult to account for as is the organic structure of

That sea beast,
Leviathan, which God, of all his works,
Created hugest, that swim th' ocean stream.

In like manner the light of revelation thrown upon nature would bring out its hidden mechanisms, reveal its deep, its spiritual meanings, and be as a

lamp to man's reason, illumining his path, showing him profound designs, where he could in his own obscure light see nothing, bring beauty out of apparent deformity, and order and harmony out of superficial confusion.

Natural theology, great as are its defects, has been kept from innumerable errors, by the employment of the one revealed truth which it has used. If, in the place of that truth, tradition had only supplied us with the fact of spiritual beings superior to man, what would have been our present theology? We can only in this inquiry attain to probability, but there are (as I have said above) many cogent reasons to suppose we should have been led to embrace some kind of Polytheism.

We find, both from past and contemporary history, that when groups of men have been separated from the great mass of mankind,—amongst whom the unity of God has always been somewhere known,—without carrying with them a record of that great truth, they have invariably fallen into Polytheism. And it is most remarkable and instructive to observe, that as such groups of men have increased into nations, and have remained isolated from the centre of civilisation, and the depository of revelation, the form which their Polytheism assumes is that which supposes the author of evil, the malignant spirit to be, if not absolutely paramount, at least on a parity with the Source and Father of good. The inclination also of the untaught speculator is rather to render religious homage and worship to conciliate the being

whom he fears will be inclined from his nature to injure him, than to discover in the predominance of good, the supremacy and power of the benevolent spirit to protect him against the evils which are everywhere around him patent and threatening.

As soon as he is merely able to find words to express the thoughts and emotions he blindly acts out in his religious observances, he tells us that he can clearly discern the inconsistency of the existence of that evil, with infinite power in the Author of good, else they would not coexist. From this conclusion, no advance of civilisation, no extension of knowledge dependent on our own powers to acquire, serves in the least to deliver us. Natural theology affords no satisfactory solution of this difficulty, even after its more refined illustrations can be drawn from a greatly advanced physiology. It is in vain to plead the abundant examples of good, the instances of benevolent design, the bounty with which pleasures and the means of happiness are distributed to myriads of sentient beings. The amount of evil in this world is too large, the instances of suffering too numerous, to be put aside; and it is only by putting them aside as of no weight in the argument, that natural theology attempts to prove the absolute goodness of the Deity, and the infinity of his beneficence; and in this attempt, it must be admitted, it signally fails, although we admit it always *assumes* the true and right conclusion. These *unproved assumptions* have not failed to excite the remarks of

infidels, and the historian who amongst them maintains a bad pre-eminence, sneers at the assertion of infinite goodness concerning God, by referring it to the generosity of the philosopher.*

We cannot permit, in this matter, the Gospel to be robbed of its glory, “for therein is the righteousness of God revealed through faith.” The perfect goodness of the Deity, his unlimited power, the consistence and harmony of his attributes, notwithstanding the existence and prevalence of evil, can only be learned from thence. The conclusions Natural Theology has come to, although not indeed fairly derived from nature by correct reasoning, are substantially correct; it has been *guided* into these conclusions, *restrained* from depending exclusively upon reason, by its most successful cultivators being in the possession of revealed truth.

What would have been the suggestions of human science, had we not been previously instructed concerning God and his ways, when modern geology added to the previously known enormous mass of evil the further remarkable fact that the dominion of death extends not only over individuals and successive generations, but that whole species of organised beings have perished from the face of the earth? Not one or two species of noxious creatures, destroyed by the encroachment of a human population upon their domains, but multitudes of species, large and small,

* Gibbon of Boethius.

have utterly perished, and their remains are stored up, and preserved, in the museum of God—the everlasting hills, to communicate to us this awful truth.

The eastern nations have Deified the supposed principle of destruction ; anciently they worshipped Moloch, and at the present moment they bow down to Siva the destroyer ; and might not nations more enlightened in physical science have listened complacently to the philosopher, who, to found a sect, to complete *natural* theology, should have referred these remarkable discoveries to the agency of a being of power and malignity, the equal or even predominant antagonist of the Beneficent Creator ? Had we not been previously better informed, is there anything in physical science at the present day to guard us against the errors into which the ancient Greek, with all his wisdom, knowledge, and skill, ruinously fell ?

Happily we, the favoured depositaries of the sacred oracles, are saved from such melancholy suspicions and practices. It was the promise of the tempter, that “the knowledge of good and evil” would be the reward of disobedience to the divine injunctions ; and when man fell, this wretched acquisition confounded thenceforth in the human mind all its notions of the Divine attributes ; the knowledge of God, which he had from a blessed intercourse and communion, he did not like to retain, he could not cherish in his heart, and he therefore shut it out from his understanding : “ he loved darkness

rather than light." Hence the spring of all error, sin, and wrong doing !

There is another aspect under which our unaided faculties would lead us to polytheism—where natural theology has been less safely guided by assumptions not warranted by nature alone. And the reason is, perhaps, that its arguments for the unity have not been challenged from this side.

When it has been asserted above that the Unity of God was a fact communicated to us, and not discovered by us, and yet when known as a fact, it can be proved by arguments drawn from nature, it is manifest that the term *proved* is used in a sense somewhat different in its signification, when applied to statements respecting the laws, or facts of material things. That it amounts only to this, that a strong *presumption* is afforded by the facts of nature of its truth, whilst there is in nature no contrary proof. "Moral evidence never reaches the certainty of demonstration, which belongs only to mathematical reasoning, and such natural truths as can be resolved into sensible appearances,"—nevertheless we can establish many moral positions, at least to the extent of serving for particular purposes, as satisfactorily as if they were demonstrated. Thus the *unity* and *perfections* of God,—so far as they have been challenged by Atheism or Pantheism,—may be deemed incontrovertibly proved, that is, every objection suggested by these systems has been refuted and put out of the way. If, however, we ex-

amine the history of this doctrine, we shall discover reasons for these proofs having been acquiesced in, irrespective of their real nature and innate force; and why the parts of nature which would weaken or throw doubt upon them have been overlooked or disregarded.

When the dispersion of the Jews, in God's providence, carried the revealed doctrine of the Unity amongst all nations,—philosophers, and the sensible portion of the people, soon seized and appropriated the truth thus thrown out to them—they knew not enough of nature to discover whether unity was exactly in accordance with its dictates, they knew nothing which could be gathered from thence to qualify the doctrine; they saw it opposed itself to all the pre-existing notions of polytheism, it explained much which the ancients had endeavoured in vain to comprehend, and it commended itself to their reason. It was, therefore, natural,—as indeed it is always natural, for man to err in his fallen condition,—that they should push the doctrine to an extreme, that they should so wish to interpret the Unity, as to preclude all and every kind of plurality. They modified their own philosophy with so much of the scripture doctrine as pleased themselves, and chose to reject the rest. This perverse proceeding has many parallels in reference to divine truth. Thus the Pharisees of old would observe with scrupulous minuteness, beyond what the law enjoined, ceremonial observances, whilst they closed their eyes to its

spiritual requirements. The ascetics would fain improve upon the injunction of the Gospel to holiness, they would be "righteous overmuch," and separate themselves bodily from the world, instead of separating spiritually and in heart. The Romanist would wish to add to the satisfaction rendered by Christ for sin, his own sufferings, penance, and sacrifices. So consonant is this disposition to *improve* upon the knowledge imparted by God to the nature of fallen man, that a system of religion, (Buddhism,) based upon a precept borrowed from the Mosaic law by an impostor who extended the precept, "Thou shalt not kill," making it comprehend the whole moral code, and absolutely universal in its meaning and application, became one of the widest spread religions of the east. The christian church itself, in its early age, seemed, humanly speaking, at one time overpowered and stifled by the pernicious weed of a similar heresy springing from the schools of philosophy. The doctrine of the Divine Unity, borrowed thence, almost universally prevailed, and nearly the whole christian world became Arian.

Hence it is perfectly in keeping with man's usual proneness to error, that natural theology should take its fundamental fact from revelation at second hand and corrupted, and so vitiate all its application to the solution of natural phenomena.

The records of revelation contain additional information superadded to the doctrines of the Unity; it asserts a plurality of *some* kind, involved in

the perfect unity of the Godhead ; and it is in this aspect perfectly coincident with nature. My argument is, that by our own powers, and in the present state of human knowledge, had tradition informed us only of spiritual beings, and the revelation of the unity had been withheld, we should not have been able to look beyond the indications of plurality to ascend to the higher truth of the Unity, but should infallibly have fallen into Polytheism. The most distinguished and best known writer on natural theology, PALEY, did not fail to feel embarrassed when facts of this class pressed upon him in his researches : he thus alludes to, and endeavours to escape from their force : he says, “ Why resort to contrivance where power is omnipotent ? Contrivance, by its very definition and nature, is the result of imperfection. To have recourse to expedients, implies difficulty, impediments, restraint, defect of power. This question belongs to almost all the operations of nature . . . the answer to it is—It is only by the display of contrivance that the existence, the agency, the wisdom of the Deity could be testified to his rational creatures. . . . God prescribes limits to his power, that he may let in the exercise, and thereby exhibit demonstrations of his wisdom. For then, i. e. such laws and limitations being laid down, it is as though one being should have fixed certain rules, and, if we may so speak, provided certain materials, and afterwards committed to another being, out of these

materials, and in subordination to these rules, the task of drawing forth a creation, a supposition which evidently leaves room, and induces indeed, a necessity for contrivance. Nay, there may be many such agents and many ranks of these . . . the Deity acting himself by general laws will have the same consequences upon our reasoning, as if he had prescribed these laws to another." This passage exhibits abundant proof of the false position of Natural Theology; for may we not be assured, that if unfettered by the truth of the Unity, modern philosophy would demand a more rigorous scrutiny into the evidence for "the many agents," "their ranks," and subordinations? Would it not, when so curious an indication of many spiritual beings was observed, seek further into other parts of nature for confirmation or refutation of this notion, when so suggested? And, on the other hand, how would the excellent author himself have dealt with the subject, had he encountered it when engaged in his other and better office of expounding scriptural truth?

In revelation we have a full and satisfactory explanation of the appearances in nature from which, if unaided or unrestrained, science would have deduced the false notion of a plurality of gods. In the many contrivances, exhibited in the construction of the machinery of organic bodies—contrivances evidently made to overcome difficulties arising from the properties of inorganic matter, we should hardly have recognised the same hand or the same power

which gave those properties primarily to the matter. In the endowments of vegetable structures, in the life they contain, we see a set of laws so essentially different to those which exist in organic matter on the one hand, and the intelligent mind of man on the other, that they would scarcely have all been referred to the same source, much less should we have supposed that the same Being whose power extended to the production of matter out of nothing, would place himself in the position, while prosecuting his designs, of subjection to these laws and properties. The whole subject of final causes is involved in this difficulty, and the wisest of uninspired philosophers,* he who could perceive that the supreme mind was not the mere soul of the world, an essential part of the material universe, but a separate existence, could only attain to the notion that matter was equally with God necessarily existent and eternal.

The Father of the inductive philosophy, he who was truly wiser than the ancients through the possession of christian truth, has shown a way for natural theology out of these perplexities, which, had it been pursued as sedulously as the way indicated by the same guide for physical science, would have led to the happiest results.

“The works of God summarily are two, that of the creation and that of the redemption, and both these works, as in total they appertain to the unity

* Socrates.

of the Godhead, so in their parts they refer to the three Persons : that of the creation in the mass of matter to the Father ; in the disposition of the form to the Son ; in the continuance and conservation of the being to the Holy Spirit : so that of the redemption, in the election and counsel to the Father ; in the whole act and consummation to the Son ; and in the application to the Holy Spirit ; for by the Holy Ghost was Christ conceived in flesh, and by the Holy Ghost are the elect regenerated in Spirit."

The doctrine then of the Trinity being that of the revelation, from whence natural theology has taken but an imperfect part and with a false gloss, what should hinder that a new theology of nature should be erected, based upon the more solid foundation of eternal truth ? The unity of the Deity, having in his nature, as we are assured by his own communication, a threefold subsistence, severally expressed by the terms Father, Son, and Holy Spirit, the one JEHOVAH, we must seek him in nature under these aspects, and if we can in any degree discern him therein, will it not be *as He is* in truth and reality ? We may perhaps not be able to understand fully the distinction implied in the scriptural phraseology, but we must guard ourselves on the one hand against dispossessing our minds of the revealed truth to us so full of interest and meaning, so pregnant with eternal hopes and fears ; and on the other, we must divest ourselves of all polytheistic

notions, all fancies of subordinate deities, ranks and orders of creators. Thus, having obtained a sure footing upon the evidences of revelation, we may advance in our inquiries into nature with fair hopes of success, taking with us as established and indisputable these important verities.

And may the grace and benediction of the Trinity in Unity—the ineffable and incomprehensible JEHOVAH, the three Persons, the Father, the Son, and the Holy Spirit, rest upon me, and my feeble endeavours, to discover him in nature, that so I may *worthily* “talk of the glorious honour of his Majesty, and of his wondrous works !”

It may be well here to meet an objection, which may be brought by the christian reader, against the study of nature with this view, and as thus defined ; namely, that the revelation of the mind and will of God in the Scriptures is so complete, that we have no need to trouble ourselves with the attempt to find God, and learn his ways, in the obscurer volume of nature, where he will admit we may, indeed, read for recreation and study for human science, but where he would caution us that unseen dangers to our peace may lurk, and our stedfastness of faith be shaken, if we attempt to derive religious instruction therefrom. But this and every such objection and fear are altogether invalid and powerless as coming from a Christian, because opposed to repeated declarations of Scripture itself. There, we

are exhorted, entreated, urged, to study nature as another manifestation of God, a body of truths concerning him, perfectly parallel with the Scriptures. We are referred to it for the confirmation of almost every doctrine advanced, for the enforcement of almost every precept enjoined, for the kindling of our faith, for its daily sustenance, for hope, for consolation, for instruction of the ignorant, for establishing the wavering, for assuring the doubting heart of the true believer. Our bountiful Father has not confined us to the bare necessities of life, spiritual or natural, but he has spread before us in his works and in his word, a feast—"a feast of fat things, of wine on the lees well refined," and invites us to partake liberally.

If the sole aim of the Gospel had been to offer to men salvation, a very short statement of the conditions on which the offer was made, and a very brief narration of the transactions by which the Son of God purchased eternal redemption for us would have sufficed. But the infinite diversity, the vast copiousness of the sacred writings, so constructed and ordered, as to have employed myriads of the best and the most highly gifted of our race for nearly two thousand years to explore, and to apply the treasures they contain to the need of men in all ages, sufficiently evinces that the due exercise of every faculty of man's nature was carefully provided for, by their Author—his Maker. The commentaries, treatises, sermons, "as the sand

that is by the sea-shore innumerable," which have been written upon the sacred records, have not yet exhausted, and never will exhaust, their riches ; and the same copiousness of illustration for the same purposes, may be extended to "the other scriptures"¹ of nature, which are replete with theological—with spiritual truth. "Many, O Lord my God, are thy wonderful works which thou hast done, and thy thoughts to usward, (in them,) they cannot be reckoned up in order unto thee ; I would declare and speak (of them but) they are more than I am able to express."²

In every inquiry concerning divine things, the believer in revelation will of course submit his judgment to that authority, and in almost every page nature is referred to, as furnishing essential illustration, and an appropriate field for the study of the Divine character, purposes, and government : this is the proper aim of natural theology ; it offers us no new discoveries, no new principles, but it is calculated, if studied aright, to bring the great truths revealed to us within the boundaries of our understandings, and into contact with our hearts. It would show us, in sensible things, types and examples of spiritual—visible impressions, amid the pliant forms of matter, of the footsteps of spirit,—and designs which harmonize our own mysterious powers with the Mind—governing the universe.

¹ An expression of Bacon.

² Psalm xl. 5, more literal than the authorised version. See T. Sternhold's, in verse.

And these are no mean purposes, no unimportant ends, as will readily be acknowledged by every man who is aware of the small practical influence of general truths, the slippery grasp we have upon abstract principles, the subjection of the human mind to sense, and its natural aversion to admit the realities of invisible things. The following examples show us the manner in which the inspired penman have referred to nature for illustrations of their high and holy theme.

§ 1. The book of Job, distinguished from the other sacred writings by some remarkable features, is occupied by a discussion between Job and his friends on the principles of the divine government, and the proceeding of God toward his creatures. The sufferings of Job, the cup of bitterness which he had drank to the dregs, the evil which had come upon him so mysteriously, and had drawn forth his confessions of ignorance concerning its immediate cause, were presumptuously referred by his friends to some heinous and concealed sin. God himself interposes, and after rebuking the irreverence of the speakers, their presumption in pretending to understand matters beyond their comprehension, and commending Job's confession of weakness and ignorance, he exhibits his inscrutable councils, displays his omnipotent power so forcibly, that Job exclaims—with the vivid feelings of recently awakened conviction—"I have heard of thee by the hearing of the ear, but *now mine eye seeth thee*; wherefore I abhor myself and repent in dust and ashes." In what manner does the Deity display and manifest

himself to the patriarch? By an exhibition of nature! HE brings before Job the wonders of nature; His discourse is a chapter of natural history; and His power, wisdom, goodness, and providence, in the endowments of his creatures, are declared to exhibit God in his personality and holiness!

§ 2. The dealings of God with his chosen people, is by himself, speaking in Moses, paralleled with the natural habits of the eagle—"The Lord's portion is his people, Jacob is the lot of his inheritance. He found him in a desert land, in the waste howling wilderness, he compassed him about, he instructed him; as an eagle stirreth up her nest, fluttereth over her young, spreadeth abroad her wings, taketh them, beareth them on her wings, so the Lord alone did lead him."

§ 3. In the 77th Psalm, the Psalmist, after expressing most forcibly the anxiety of mind, the trembling of heart, arising from a conviction of sin, to which he had been awakened by affliction, while he was unable for the time to realize, amid his own frailties, any confidence in the fidelity of his God, the light of God's countenance hid from him for a moment, turns to nature, and discovers there a ground of hope, a foundation for faith, in the abundance of his mercies: he acknowledges that to doubt, because his relief is delayed, is his own infirmity, but he obtains a renewal of his hopes, by "remembering the years of the right hand of the Most High," that His providential interpositions await appropriate times. "He remembered the

works of God, his wonders of old—he meditated of his works,” and concludes—“The waters saw thee, O God, the waters saw thee and were afraid, the depths trembled . . . Thy way is in the sea, and thy path in the great waters, and thy footsteps are not known. Thou leddest thy people like a flock by the hand of Moses and Aaron.”

§ 4. The positive and absolute denunciations of the law, “The soul that sinneth shall die;” and “cursed is every one that continueth not in all things written in the book of the law to do them;” although modified and restricted by the appointment of the sacrificial services for sin, more especially those of the day of atonement, were calculated to strike terror into the heart of the thoughtful penitent, who, under the law, had been led away into the commission of crime by some great temptation. It was, therefore, a prominent office of the prophets to preach forgiveness of sins, to proclaim the readiness of God to forgive the returning backslider, to commend his righteousness, who provided a way to be just, and yet the justifier of the ungodly. The most powerful motive to restrain sinners from plunging into an excess of wickedness through despair, was furnished by the assurance that God would vouchsafe his aid in their future struggles against temptation, as well as cleanse them from the defilement of past transgressions. And in the exercise of this office how often do the prophets find a warrant in God’s proceedings in nature for the cer-

tainty of his forgiving mercy, and the timeliness of his interference and aid ! “ Can a woman forget her sucking child,” says God, by the mouth of Isaiah, appealing to the maternal instinct implanted by himself in the human heart, “ that she should not have compassion on the son of her womb ? Yea, she may forget ! yet will not I forget thee.” “ Come, and let us return unto the Lord,” says Hosea, “ for he hath torn, and he will heal us, he hath smitten, and he will bind us up. After two days will he revive us ; in the third day he will raise us up, and we shall live in his sight. Then shall we know if we follow on to know the Lord : his going forth is prepared as the morning, and he shall come unto us as the rain, as the latter and former rain into the earth.”

§ 5. If we turn to the New Testament, we find still the same references to nature. The first example I shall adduce, is that where our Lord enforces a trust and confidence in God’s care and providence, by referring to very plain and obvious cases in nature ; and the beauty, force, and appropriateness of the motive urged, must be felt by every heart and acknowledged by every mind. “ Behold the fowls of the air, for they sow not, neither do they reap, nor gather into barns ; yet your heavenly Father feedeth them ! Are ye not much better than they ? Which of you by taking thought can add one cubit unto his stature ? And why take ye thought for raiment ? Consider the lilies of the field, how

they grow, they toil not, neither do they spin. And yet I say unto you, that even Solomon in all his glory was not arrayed like one of these. Wherefore if God so clothe the grass of the field, which to-day is, and to-morrow is cast into the oven, shall he not much more clothe you, O ye of little faith?" The exquisite poetic beauty of this passage is only equalled by the profound thought it suggests, and the force of its admonitory lesson.

§ 6. Again the growth, increase, and fructification of a seed, its dormant life exerted into activity by genial warmth, and its nourishment drawn in silence and secrecy, is made by our Lord to illustrate the progress of the kingdom of grace; rooted and grounded in the love of God, its vitality and powers imparted by the grace of Christ, and sustained by the unseen effusion of the Spirit, to its full developement, and the perfection of its *fruits*, holiness, peace, and happiness.—Mark iv. 26—29.

§ 7. The apostle of the Gentiles employs the same illustration in his argument for the certainty of the resurrection of the body, a tenet affording so blessed a hope, and pointing to the germination of grain, and the reproduction of the same body, "as wheat or other grain" in its growth and increase, as an analogous instance, and a triumphant answer to the sceptical questions,—“How are the dead raised up? And with what body do they come?” If any one rests his scepticism on the presumed difficulties of

re-collecting and re-animating the scattered elements of his body from the dust of death, let him learn from a fact in nature, passing immediately under his own eye, a better philosophy, a more confiding faith, and a more rational one !

§ 8. The mutual dependence of every member of the church, and their perfect subordination to Christ, its Lord and Governor, the same Apostle beautifully illustrates by the natural phenomena of growth and unity in the animal body, (Ephes. iv. 13, et seq.) “ That we be no more children—but may grow up unto him in all things which is the head, even Christ. From whom the whole body fitly joined together and compacted by that which every joint supplieth, according to the effectual working in the measure of every part, maketh increase of the body to the edifying of itself in love.”

§ 9. When our Lord would convey a vivid impression, and explain most clearly the manner of the Spirit's influence, he points to the unseen, yet felt power of the wind ; his own speedy and sudden return to judgment, is likened to the course of the lightning. The care of God's providence exerted over the lives of his intelligent creatures, he shows by the watchful exertion of the same providence over the animal creation. The union which subsists between himself and the members of his church, is likened to the connexion of the vine and its branches. And the enduring, preserving, purifying influence of the church, the righteous citizens whose presence

saves the world, is shadowed forth by the natural septic qualities of salt—"Ye are the salt of the earth."

§ 10. Above all, there is one instance of the use to which nature is applicable as accessory to our faith recorded in the life of our Lord, which, when we consider the solemnity of the occasion upon which it was employed, the stupendous interests which were involved, and the profound feelings amid which it was suggested, we cannot fail to perceive that by it, nature is for ever sanctified to the uses of the people of God for reference in their most severe trials and greatest difficulties. It is related by Saint John, chap. xii. verse 20—"And there were certain Greeks among them that came up to worship at the feast. The same therefore came to Philip, which was of Bethsaida of Galilee, and desired him, saying, Sir, we would see Jesus. Philip cometh and telleth Andrew, and again Andrew and Philip tell Jesus." Our Lord evidently received this intimation as a sign given him from the Father of the arrival of the period pre-ordained in the eternal counsel of God, for his sufferings and sacrificial death. For we are told that "Jesus answered them, saying, The hour is come, that the Son of man should be glorified." Many other passages in our Lord's life subsequent to this exhibit him shrinking, as it were, in his human nature from the accumulated misery he had submitted to endure for the sins of the world. And although perfectly resigned to the

will of God, resolved to the obedience unto death, yet in the apprehension of that passion he exclaims in an agony, “Father, if it be possible, let this cup pass from me!” In the passage before us, at the first view of the dreadful crisis suggested by the inquiry of the Greeks, our Lord finds confidence in God’s unchangeable nature. And whence might we have supposed our Lord would have sought and derived this confidence? Why should HE indeed have needed any assurance whatever? The answers to these questions are obvious. It was meet that he should be a perfect example in all things. For this purpose he took upon him our nature, and was made like unto his brethren. Yet we might have supposed that the assurances of God’s prescience and providence, recorded by the prophets, the history of God’s dealings with his people, would be available to them and to him; and oft indeed had he referred to that precious source of consolation, and oft was he to recur to the same in his deepest affliction. Yet now, at this time, —a time of painful anticipation, and with the view, doubtless, to point out to his people in all ages the foundations of their faith, he derives the needed confidence and assurance from God’s acts in Nature. “Verily, verily, I say unto you, except a corn of wheat fall into the ground and die, it abideth alone; but if it die, it bringeth forth much fruit.”

Examples might be multiplied, but these may suffice to support the practice of studying nature

in the Spirit and by the light of the Gospel, and to show that natural theology may be extended far beyond its present recognised purposes of proving the existence and illustrating the attributes of God; that it may be made subservient to the great end of revelation, the enforcement upon men's attention the claims of God to adoration and worship, and the acquisition of holiness, by aiding us to apprehend and to cultivate a resemblance to his moral perfections. A complete consideration of every example in the whole book of revelation, together with a comprehensive and profound knowledge of nature, would be required to perfect this branch of science;—our purpose is but to explore a small section of this vast field, and to discover in the ordering of our afflictions, their alleviations and remedies, the principles of the Divine character and government. But before entering upon this our especial purpose, it is necessary to illustrate another doctrine of revelation belonging to the doctrine of the Trinity, namely, the Incarnation of the Son of God—the Eternal Word.

At first sight, and upon but a superficial view, it may appear that the knowledge revealed to us concerning the nature of God,—that in the unity of the Divine nature there is a Trinity of persons,—is an abstract truth of little practical import, and had it been withheld from us, it would not have altered the moral obligations which his *being* enforces on us, or the character of the worship we are bound to render him. What is the difference, it has been asked,

whether we pay our adoration to our Maker as the one only and true God, avoiding all speculations concerning his nature, or hold the orthodox opinion of the three Persons of the Trinity? Such a question and such an opinion would throw contempt upon the whole written Scriptures, where the truths concerning the nature of God are woven into the texture and made the root and substance of all truth, the foundation of moral obligation, the material and structure of religious worship; and it cannot be reasonably doubted by the christian philosopher that it is the keystone of the arch of natural knowledge, the crowning truth to the perfected system of genuine philosophy.

It would appear, therefore, to be impossible to investigate nature successfully for truths concerning the Deity, without taking this great fact with us, to guard our progress and measure our success. God condescended to reveal it to us to promote his purpose of beneficence and love, and it is obviously our duty to receive the commemoration with reverential thankfulness, and in the employment of our faculties, to apply it, whenever it is applicable to the solution of the appearances in nature, whether in matter or mind, and to bring it home to our understandings and hearts; for the deepening our humility, the strengthening our gratitude, the kindling and sustaining our adoration and love to himself, by such illustrations of it as nature furnishes us with from every quarter—searching diligently into the works of God for traces and reflections of himself. As the

ground we tread upon in approaching questions concerning the nature and attributes of the Deity, is holy, we cannot more safely proceed than when under the guidance of Scripture ; and as Moses was warned to remove the shoes from off his feet when God was in the midst of the bush burning with fire, yet not consumed, and even then to approach not too near ; so should we stand upon the bare ground of truth, interposing no prejudice of our own, not attempting to penetrate into mysteries beyond the reach of the human faculties, but in simplicity and sincerity to listen to the Divine communication.

The arguments by which natural theology has proved the being and illustrated the attributes of God, have been all drawn from what is called *design* in nature. In every complex argument in natural bodies, means are observed to subserve certain purposes or ends ; that is to say, certain arrangements in nature *appear to us* as if they flowed from a pre-conceived intention of an intelligent being, whose power and skill were employed to effect purposes which he had previously designed. Hence we speak of adaptations of means to ends, of marks of design, contrivance ; and we deduce from thence the existence of an adapter, a contriver, a designer. Now it is evident that such arguments rest upon the analogy between the acts of man and the appearances of nature. To form a purpose, or end, to design, and to choose the means for effecting the designed purpose, are acts of man's mind ; and in the adapta-

tion of means, and in the use of the most appropriate to promote the purpose actually effected in any work or contrivance, we perceive the power, the wisdom of the mind designing, and, to speak somewhat figuratively, the skill of the hand executing its pre-ordained purpose. Now, in examining nature we have everywhere appearances as *if* an intelligent being had purposed certain ends, and had adapted means to accomplish those ends, because we feel that if we had similar purposes to effect, and the means were within our power, we should employ them for our purposes ; and, on the other hand, that we should never bring together such arrangements, except we had pre-designed the purpose they actually effect. This, the basis on which the argument from design rests, has been little noticed in treatises of natural theology. If the sceptic chooses to deny the existence of design, to say that the ends effected do *not* imply the existence of any intelligence which arranged the means,—of any mind conceiving and executing the work to the pre-ordained purpose, he escapes the whole force employed by natural theology. It has, indeed, often been said that the validity of Paley's admirable argument is destroyed by his having assumed the very point he should have proved, by his having been guilty of the logical error of begging the question. But the truth is, the argument for the justice of denominating, the innumerable associated phenomena of nature, *design*, is so simple, so plain, so cogent, and although certainly

an analogical one, so satisfactory, that it is a very poor and weak refuge for the sceptic wherewith to shelter himself. By a precisely similar analogy alone, is man able to know of the existence of mind in his fellow-man. If a voyager arrives at an island, where at first he sees no inhabitants, he seeks no other species of evidence to convince him whether or not the country is or has been inhabited. Indeed it is the character of every sceptical objection to theological truth, to be contrary and opposed to principles upon which men act in the common affairs of life.

Evidences of design so defined and so limited are found in everything and in every part of nature—(as I have before remarked for another purpose)—and the additional strength gained by the accumulation of particulars, makes the extent of natural theology coeval with the whole range of the sciences, and with all natural history. Every being endowed with life, whether vegetable or animal, is a machine so constructed as to subserve certain purposes: we conceive that a machine which actually accomplishes something, and which, when we take it to pieces, we find constructed, according to our judgments, in the best way that could have been devised to accomplish its especial purpose, was designedly so constructed. We assume in this conception of design an *intelligence* which *designs* or *intends*. But it must be further observed, that the whole argument implies that this designer, this intelligent and

thinking being, must possess attributes not essentially different in kind to the human mind.* It is by assuming this likeness that we understand the intentions of the Creator, whose power may be indeed far greater than human, whose skill surpasses our understanding, whose wisdom is most profound. Yet nevertheless we do not by adding to the force of these attributes, discover a difference in their nature, to the power, skill, and wisdom, which might attach to one of our own species, extended and exalted. When indeed we know, whence soever that knowledge is derived, the existence of the ONE SUPREME; there is no longer a necessity for proceeding so cautiously in our inquiries and inferences, and if that truth (now proved to be a revealed truth) were unqualified and alone, it would be most presumptuous to speak of God—the great, glorious, and omnipotent Governor of the universe—as being an intelligence, the same in kind as feeble man. Yet such is in truth the suggestion of nature, and this suggestion ought to have entered into the inquiries, and to have modified the conclusions of natural theology; for if the argument for the *Being* of a God derived from design in nature be of any force, if the proofs it has relied upon sustain its inferences, they more directly establish the point before us, they make this resemblance certain. This most interesting and important topic has been passed over in silence in all works on natural theology, and for obvious reasons. It

* See note B at the end of the chapter.

would, upon their avowed principles, have frustrated their whole design—it would have obscured the view and marred the contemplation of those attributes of God, upon which they have chiefly delighted to expatiate.

Concerning those attributes, we admit that by the strictest examination on the principles of our best science of every work of nature, from the simplest case of affinity between the elements upward to the principles of the mechanism of the heavens ; from the formation of the simplest plant, the tiniest moss, to the splendid vegetation of the forest ; the meanest fibril possessed of life, up to the most perfect organic structure, the human body ; in each and all of these we perceive that the power manifested in adapting means to the desired ends, far exceeds human power, that the skill discovered is surpassing, that the wisdom is profound, and that in general the results of all the contrivances and adaptations of things in nature, tend to promote the happiness of sentient and intelligent beings. Nevertheless, when it is asserted that those attributes are infinite, it is evident that we leave the argument which *nature* furnishes, and assume a doctrine of revealed truth. INFINITE, implies a power which extends every where and to all cases ; wisdom, skill, resources against all emergencies, and benevolence associated with these, and illimitable, insuring the universal and ever-during prevalence of happiness and peace.

Now, the assertion of the *infinity* of the divine attri-

butes is not warranted by our knowledge of nature alone; we have already shown where certain limits to these attributes are suggested, as in the existence of evil, and in the very first principles of the construction of organized living beings.

But above all, the constitution of human nature, considered under every aspect which it presents, suggests some wonderful limitation in the skill, wisdom, and benevolence of the *Supreme* Creator. By the light of nature alone, “It does look like an impracticable enigma, that the omnipotent God, who could have grafted all the capacities of thought and feeling on an elementary atom, should have deemed fit to incorporate the human soul in the midst of so curious and complicated a framework. For what a variegated structure is man’s animal economy! what an apparatus of vessels, and bones, and ligaments! what a complex mechanism! what an elaborate chemistry! what a multitude of parts in the anatomy and processes in the physiology of this marvellous system! what an unwearied play of secretions and circulations, and other changes incessant and innumerable!”* and we may add, what perpetual pain, disturbance, distraction to the mind, do these complications, in the present condition of man, involve! Can they consist with infinite power and benevolence in our Maker?

The infinity of the divine attributes flows necessarily from the doctrine of the Unity, and with that

* Chalmers.

doctrine is also assumed from Revelation, (not proved by reasoning upon nature,) by natural theology. In general we solve the great enigma by saying, that in nature “the incomprehensible wisdom of God doth limit the effects of his power to such a measure as seemeth good unto himself.”*

On inquiring further into the nature and design of this limitation, we find that it proceeds always in such a manner as to imply that the constitution of the human mind, its modes of receiving impressions, and its powers of investigation, were the principles which guided the Creator in the *manner* of his work ; in other words, we discover everywhere an adaptation of nature to the understanding and uses of man. Now, as we have seen, this view of nature suggests a similarity of some kind between the Almighty God and his feeble creature, may we not attempt to trace the extent of this resemblance by the light of revelation, and see whether in this very remarkable feature it corresponds with the theology of nature ?

As we cannot by searching with our own powers find out God to perfection, so neither can we attain to the understanding of ourselves. We should not, without the divine aid, have ascertained that within us is involved a principle, a soul, the subject of thought, volition, feeling, and moral sentiment, distinct and separable from our bodies, and capable of a separate existence in a state of consciousness. We should not have known that we are SPIRITS, linked

* Hooker.

by a dissoluble tie to an organised frame, an animal body. Shut up as it were within this material prison we are scarcely able to apprehend, save by a complex process of thought, and by the aid of analogies, the assistance of metaphors and a circumlocution of terms, what *Spirit* is ! and yet this is the *essence* of our being. Neither could we have predicated that there is aught immortal in the fluctuating, changeable, perishing fabric of our animal frame. That the hidden and spiritual part of our nature is destined to endure for ever. *

These are truths made known to us by revelation, and although when thus communicated to us they receive much confirmation and illustration from things which are discovered by our natural powers, the appropriate basis upon which our conviction of their truth rests is Faith. From the same source and upon the same testimony, we learn that "God is a spirit," and that there are in the universe other spirits, unfettered by any material organic frame, his ministers and angels.† As a spirit, the Father of spirits, the fountain of all light and life, the Scripture everywhere expressly declares that God is incomprehensible, unapproachable, dwelling in light inaccessible, which no eye hath seen or can see ! and that he alone hath immortality ! inherent and independent. In the language of the church, "There is but one living and true God, without body, parts, or

* See note C at the end of the chapter.

† Heb. i. 14 ; ii. 1.

passions,” and yet there is an incessant demand made upon man for his worship, the devotion of his powers to understand, and of his affections to love and obey his God and Maker. How can these be reconciled? By considering that there is a still further resemblance revealed to us between God and his creatures. In the sacred records we are admitted into the divine counsels before the actual existence of our species. God is shown to us as saying, “Let us make man in our own image after our likeness;” and we are told that “God created man in his image, in the image of God created he him;” and again, most emphatically is it repeated—“In the day that God created man, in the likeness of God created he him.”

This could not mean only that man was made a spiritual being, in moral purity and holiness like his Maker, as it is generally interpreted, although such a meaning is doubtless included in the expression; but it must extend so much further as the subsequent revelation carries it. For ages after his creation, and in spite of his loss of holiness, man enjoyed the privilege of sensible communication with his Maker, vouchsafed for the purpose of restoring that holy communion which had been interrupted by the fall, and it was in accordance with this design that he was presented with a view of the Divine nature, as well as exhorted to conform to his law. In all these supernatural communications, whatever might be their immediate purpose, God was pleased to

present himself, clothed in the attributes of humanity. On Mount Sinai, at the solemn promulgation of the law and ratification of the first covenant, he addressed the assembled thousands of Israel by a voice like the human.¹ In the secrecy of the midnight chamber, when a little child was the favourite recipient of the divine message, it was by such a voice that the communication was made.² When the purpose was the execution of vengeance upon the deeply guilty cities of the plain, and God appeared to warn his faithful servant Abraham,³—when a visit of mercy and gladness to the suffering people of God was vouchsafed to Manoah and his wife,⁴—when the three children walked in the midst of the “burning fiery furnace,” and were to be delivered;⁵ in all these cases God appeared in a human shape.

In the wonderful visions witnessed by the prophets, to sustain their own hearts amid the fierce persecutions and dreadful sufferings they were called upon to endure, whilst fulfilling their missions, preparatory to the gospel, to sanction their offices, and foreshow to the godly remnant of Israel — “the peace and goodwill to men” fully manifested in Christ. In these visions of the *throne* of the “Ancient of Days,” “the likeness of the appearance of a man” occupies that throne. Isaiah vi.; Ezekiel i. 26; Daniel vii. 13.

¹ Exodus xix.

² 2 Samuel iii.

³ Genesis xix.

⁴ Judges xiii.

⁵ Daniel iii.

Throughout the whole of the Old Testament the same representation is maintained, that is—"to God is attributed a human form with its organs and functions, and a human mind with its affections and powers," guarded, however, by many precautions and suggestions, lest the worshipper should mistake the human attributes for the essential Deity. And how are these marvellous passages of Scripture to be interpreted? Is the representation they contain to be considered a mere figure adopted and employed in consideration to our feeble understanding? This would be a very partial statement, and would shut us up to a very narrow view of the truth.

It was most unquestionably in anticipation of, and to direct the eye of faith to that great event, the incarnation of the Eternal Son of God; the descent from His exalted and spiritual throne of God THE WORD, and his indwelling in an organic frame—a material body. So holding communion and identifying himself with man. This wonderful event, which in its magnitude, importance, and results, surpasses the utmost bounds of our imagination to embrace, gives man his true and only dignity; it imparts a meaning, and attaches an importance to every faculty of his nature; it explains the remarkable limitation of our powers, and the adaptation to them of external nature. It shows us why the material world,—the elements,—the brute creation,—are subject to man, and are made to minister to his use; it removes most of the difficulties

of mind, and solves most of the problems which surround our moral nature.

In this great act of condescension, all the perplexities, which had confounded man respecting his creation and his state, were explained. Then, God “destroyed the face of the covering cast over all people, and the veil spread over all nations,” then “was death swallowed up in victory,” and from thenceforth all doubting, ambiguity and confusion respecting the divine BEING was removed, and man might exclaim, “Lo! this is our God, we have waited for him, and he will save us; this is the LORD, we have waited for him, we will be glad and rejoice in his salvation.” Isaiah xxv.

Science has presented us with the information, which God in his wisdom left to be discovered in modern times, that, by a succession of creative acts extending throughout many ages, God gradually prepared the earth for the abode and service of man, constructing many organised beings upon a plan similar to that which ultimately he used in fabricating the human body. Many of those creatures he afterwards blotted out of existence—the mysterious purpose of their being having been accomplished; and at a comparatively recent epoch man was placed upon the earth.

Revelation at this point takes up the wondrous tale, and informs us that God made man “a little lower than the angels,” endowing him with a spi-

ritual nature, “thus crowning him with glory and honour,” and gave him dominion—a limited and responsible sovereignty, however—over the material world. And as we may always, from what we can discover of God’s works, *infer* his designs, we perceive that this new creature, this embodied spirit, was intended to know and to love his Creator, and pay to him his homage and adoration by means and powers—confined and limited indeed,—but essentially different to the manner of knowing enjoyed by pure spirits; was intended to stand at the head, to represent the animal creation in the assembly of God’s dependants, and to link the material and spiritual universe. And God has further and supremely dignified this nature by partaking of it himself.

In the constitution and construction of the world and its occupants, he limited himself by the properties and laws primarily imposed upon matter, assumed a position of subjection, “took upon him the form of A SERVANT,” obeyed these laws and ordinances, used contrivances, expedients, and complicated mechanisms to frame a universe of beauty and life in conformity to them, and thus set forth, in creation, an eternal memorial to inquiring spirits of a plurality in his own nature, which in process of time he was to reveal; and a resemblance to the nature of his creature, which it was his good pleasure to assume.

Every intimation of this assumption of man’s na-

ture stands an enduring pledge, that, whereas he had forfeited his claims to God's love, rendered himself by disobedience, obnoxious to evil and suffering, God would redeem him from that sin and its consequent misery, and restore him to the holiness and happiness of that estate wherein he was the image of his Maker. It assures him of a Mediator to plead for him before his offended King and God, "a daysman who may lay his hand upon both," a High Priest who is ever compassionate, and touched with a feeling of our infirmities, to offer up a sacrifice acceptable to God, a full atonement for all sin, and a merciful Judge, "who knoweth man's frame and remembers that we are dust."

In the deep sense of our fearful state when at enmity with God, and in the ecstasy of our joy, when by faith we realize the accomplishment of our redemption by the suffering and death of the Son of God, we lose sight of much of the ultimate meaning of the incarnation; we are apt to forget that the redemption of man is but a means to an end, a process of a comparatively brief duration, preparatory to a condition destined to endure throughout eternal ages. Contemplating the redemption of man as completed, we have still the momentous and wonderful truth of God indwelling with human nature. Man is to be no otherwise changed than purified from all corruption and sin in the alembic of the grave, the dissolution and recomposition of his bodily frame in his death and resur-

rection. Whatever speculations we may indulge in respecting his intermediate, disembodied, spiritual state, we are full certain of a re-union of body and soul, a reconstitution of human nature as at the beginning, only exempted for ever from the power of evil over his mind, and the influence of disease upon his body. The integrity, purity, and beauty, of the human body, when it shall be changed, and made like unto the glorious body of our blessed and risen Lord, will last eternally,—“it is sown a natural body, it is raised a spiritual body.” Still men are to be raised again as *men*, are still to be thinking and feeling, although not suffering beings; and still the Almighty God, the King Eternal and Immortal, is to continue invisible,—for no eye hath seen nor can see him,—the only begotten Son of God, who is in the bosom of the Father, *alone* reveals him. Although doubtless he will be incalculably more conspicuous to the eye of faith in the Son of Man, who has been taken into the Godhead to be our Emmanuel—the God, to, with, and for us men.

In this exalted contemplation we are preserved from straying into error by the revelation from God himself of the deep mysteries of his nature; we are informed of the Holy Spirit, who is everywhere present unseen and unrecognised by sense, operating to the production of all good, all beauty, all joy, in thinking, feeling, living beings,—immeasurably in the Son of Man, and adequately to perfect happiness in the hearts of each of his children by

adoption and faith. In the intense struggle of the human heart toward perfection and happiness, we are furnished in the incarnate Deity with a perfect model of our nature to guide our aspirations, and in the quickening Spirit, with a vital power to animate our endeavours. With him is the fountain of Life, and in his Light only shall we see light.

In the doctrine of the incarnation we have not only an earnest and a pledge of the redemption and resurrection of believers, "body, soul, and spirit," but we are furnished with a key to unlock many mysterious powers and principles, which work in the secret recesses of the human mind and heart, whensoever and wheresoever men think and feel. The exercise of the higher faculties of our minds, the poetic powers of our nature, the creative energy of the imagination, the moulding and modulating agency of fancy, the deep and sensitive touchings of our sympathy, excite in us an intense yearning for power, for life, for beauty. How shall these longings be satisfied? They have a vast and almost illimitable expansiveness! How shall it be filled?

The perfection of human nature, of all those powers and faculties, of which the crude and unformed germs exist even now within us, stifled and stunted by their subjection to evil, yet struggling and writhing to be emancipated, will be hereafter completely accomplished. The mind under perfect discipline, the affections all ranged in order and symmetry, under

the one master and guiding principle—the love of God—the external form, the body itself, developed in perfect beauty ; then, when this mortal shall have put on immortality, will the full design of our Maker be accomplished. The impulses of life and feeling excited by the face of nature, by its ever-varying light and shadow, its pure and sweet intermingling of colours, “ its concourse of sweet sounds,” the animated forms which enliven it, and the sweet silent creatures of the fields and groves, now only faintly and obscurely felt, will be a deep and abiding well-spring of joy and happiness to the spirits of Just Men made perfect !

The powers and principles which work in the inorganic materials of the world, now dimly apprehended and imperfectly understood, will be completely known, and subject to our use and employment. Perhaps—and the conjecture might be supported by evidence—the understanding will be supplied with materials of thought, from recollections of that intermediate state which precedes the resurrection of the body, impressions upon the free spirit, bright visions of other worlds, and of spiritual and angelic beings, not in faint and indistinct gleams, but in clear and well-defined convictions. Some philosophers, contemplating the mysteries of thought, and the indistinct yet vivid feelings stirred up in the heart of childhood and youth, by the novelty of the impulses received from the living beauty of nature, have imagined that man, even in this world, has

brought some such mementos of a previous state of existence.

Our birth is but a sleep and a forgetting,
The soul that rises with us, our life's star,
Hath had elsewhere its setting
And cometh from afar.
Not in entire forgetfulness,
And not in utter nakedness,
But trailing clouds of glory do we come
From God, who is our home.
Heaven lies about us in our infancy,
Shades of the prison-house begin to close
Upon the growing boy ;
But he beholds the light and whence it flows,
He sees it in his joy.
The youth who daily farther from the East
Must travel, still is nature's priest,
And by the vision splendid
Is on his way attended ;
At length the man perceives it die away,
And fade into the light of common day.*

This, however, is the mere creation of imagination ; but it is not imaginative to believe that with the powers of the mind and the affections of the heart, the external form of the human species, will hereafter be developed in perfect beauty. A complete realization of the yearning of genius and the efforts of ART, not in forms of marble, but in living, moving beings ; not in a few vague abstract forms, such as the Greeks accomplished by embodying each separate attribute of human nature, its faults and vile passions as well as its excellencies.

* Wordsworth.

The resurrection of the just will produce human beauty associated with perfect purity, diversified by individuality, and extended over and upon an innumerable multitude of every people, and tongue, and nation. “The glorious beauty of the Lord our God will be upon us,” and “then shall we be satisfied,” and then only, “when we awake in his likeness !”

It is because God has vouchsafed in his infinite wisdom to assume our nature, to dwell in a body like our own, that the perfection of human nature may be anticipated ; because he has placed himself in the position to be touched by the same influences from his creation, and to reciprocate all human sympathies. For by him “who is the image of the invisible God, the first-born of every creature, were all things created that are in heaven and that are in earth—all things were created by him and for him.” “Thou art worthy, O Lord, to receive glory and honour and power, for thou hast created all things, and for thy pleasure they are and were created.” Thus while God has been pleased to create man with powers, limited and restrained, and yet to implant within him a “love and longings infinite,” he has compensated for the restraint and limitation by stooping into the sphere of our understanding, and making himself the appropriate object of all our affections, the aim and centre and resting-place of all our powers ! We adore, we worship, we believe, we love him, we hold communion with him, thus undazzled by his ineffable brightness, “we see God and live !”

“Sith God has deified our nature, though not by turning it into himself, yet by making it his inseparable habitation, we cannot now conceive how God should without man either exercise divine power or receive the glory of divine praise.” *

If the wonderful fact of the voluntary humiliation of the Son of God does not satisfactorily explain the great mystery of the existence of evil, and its apparent inconsistency with the omnipotence of God, it at any rate somewhat lessens the difficulty of its solution to our apprehensions, by no longer leaving it an isolated fact, but it brings it under the more general principle, that in all creation God places himself in the apparent situation of a subordinate agent. “God does not,” in creation any more than in grace, “work like a natural agent, as the fire doth inflame and the sun enlighten, according to the utmost abilities which they have to bring forth their effects. But the incomprehensible wisdom of God doth limit the effects of his power to such a measure as seemeth good unto himself.” We find in the Incarnation the best and most satisfactory ground of assurance that God’s omnipotence will ultimately be vindicated, that he will make all things work together for good, that he will put all rule and all authority under the feet of the exalted Son of Man !

Although natural theology has attempted to approach God by another way than the one only living

* Hooker.

and true way of Christ,—has expected to reach in nature to the high truth of the Unity, while it has passed by many and most remarkable indications of the Plurality of the Divine nature,—it seems tacitly to have admitted that, treated thus, nature presents but faint motives for the institution of worship, or for the recognition of any claims which God may have on our love and services. It has *not*, we suppose, expected to accomplish any acceptable service to the Deity from so dry and jejune a treatment of the glories of his work, inasmuch as it has scarcely made the slightest effort to introduce to man a *religion* of nature. To the end of establishing a proper worship, and religious observances pleasing to God, the impulse of the Holy Spirit in our hearts is necessary; and the recognition of the indwelling Deity is the only ground of hope that our struggles against the powers of evil will be victorious; the only lever to elevate our souls into the region of light and life, which else cleave to the dust; the only motive to impel us to seek a union with and a resemblance to God in holiness, the only prospect of attaining that happiness which flows from the Beatific Vision, the reward of holiness. “Blessed are the pure in heart, for they shall see God.” “Work out your own salvation,” says the apostle, “with fear and trembling, for it is God that worketh in you, both to will and to do of his good pleasure.”

The scriptural truths concerning God as the Creator, Redeemer, and Sanctifier,—as the King

eternal, invisible,—the incarnate image of the invisible God, the indweller in the body, the church, so strikingly responded to in nature, (as far as material things may be calculated to furnish evidence of such profound spiritual truths,) natural theology has disregarded. But what shall we say to the following sentiment, forming the conclusion of a recent treatise upon this subject by a noble and popular writer? “Little is to be found of particularity or precision in anything that has been revealed to us respecting the nature of the Godhead. For the wisest of purposes, it has pleased Providence to veil in awful mystery almost all the attributes of the Ancient of Days beyond what natural reason teaches.” If it be intended to say that our natural reason, so far as its exercise is applicable to this profound subject, exactly corresponds with and verifies the scriptural revelations, the sentiment is perfectly true; but if it is meant that there is now no more known than natural reason teaches without the aid of a revelation, nothing can be more erroneous. Great indeed is the mystery, and profound the abyss of knowledge of God and godliness,—so great that we may employ eternity, ever advancing and never reaching to its attainment. “Can *we* know the Almighty to perfection?” Can a finite being—one whose powers are bounded within any limits—comprehend an infinite? But so much *may* be known of the divine nature, through the scripture, and from nature interpreted by its rules, that we

need no more. We are able to discover that all truth, all beauty, all goodness, depend upon that knowledge; our intellectual faculties, our imaginative powers, find in him, and in him alone, as revealed to us, the proper object and end of these laws and actions, and our moral nature without that knowledge is a dark and dismal void.

In the study of nature, then, for theological truth, the CHRISTIAN must keep steadily in view that HE who was found in fashion as a man, who yet thought it not robbery to claim equality with God,—by whom, according to the testimony of the apostles, the worlds were made,—that HE is the WAY, the TRUTH, and the LIFE. Nature, as it lies within the boundaries of our knowledge, is *His* province, the arena for the display of *His* attributes and *His* presence.

One Spirit—His

Who wore the platted thorns with bleeding brows—
 Rules universal nature. Not a flower
 But shows some touch in freckle streak or stain
 Of His unrivalled pencil. He inspires
 Their balmy odours and imparts their hues,
 And bathes their eyes with nectar, and includes
 In grains as countless as the sea-side sands
 The forms with which he sprinkles all the earth.*

As we would now make inquisition into a department of nature avoided by the natural theologian by reason of its inherent difficulties, upon his system insurmountable, let us look for indications of the attri-

* Cowper.

butes of the *Incarnate* WORD. And in the infliction of diseases, in their laws, restrictions, and effects, in remedial powers, agents, and processes, we shall trace His hand, mark His sovereignty, who under whatever of all his glorious names of wisdom and power he may be elsewhere denominated,—we must herein expect to encounter and recognise Him as THE GREAT PHYSICIAN—“That in all things he may have the pre-eminence!”

NOTE A.—Page 115.

“The ancients held the world to be their God, matter its body, and the ethereal powers of the heavens its soul. They appear to have been acquainted with revealed truth, and by the refinements of philosophy to have fallen into materialism, and naturally and gradually to have descended to the grossest depths of atheism and idolatry.”—“Metaphysical inquiry into the method, objects, and results of Ancient and Modern Philosophy, by J. P. Cory, Caius College, Cambridge.” Although I have taken the motto of this chapter from this little book, and I quote with pleasure the opinion of one well read in ancient philosophy, that the heathen philosophers had, from some source, a certain amount of revealed truth, yet I had not seen it when this chapter was written, nor do I agree with all the notions therein set forth. The *cause* of atheism and idolatry was not the refined speculations of philosophers, as the author supposes. The Apostle teaches us (Rom. i.) whence the denial of God and the worship of the creature had its origin.

NOTE B.—Page 154.

Whewell, in his *Bridgewater Treatise*, p. 307, speaking of Scientific discovery, and the gradual attainment of the knowledge of

general laws in nature, says, “ This step so much resembles the mode in which one intelligent being understands and apprehends the conceptions of another, that we cannot be surprised if those persons in whose minds such a process has taken place have been most ready to acknowledge the existence and operation of a superintending intelligence, whose ordinances it was their employment to study. . . . They could not but readily acknowledge that what these faculties had enabled them to read, must have been written by some higher and profounder mind.”

Another passage in this work touches still more closely upon my argument in the text ; it occurs at p. 317. He is showing generally that men most distinguished for their scientific discoveries, have been eminently religious.

“ With regard to Pascal, however, we ought not, perhaps, to pass over an opinion of his, that the existence of God cannot be proved from the external world. ‘ I do not undertake to prove this,’ says he, ‘ not only because I do not feel myself sufficiently strong to find in nature that which shall convince obstinate atheists, but because such knowledge without Jesus Christ is sterile.’ It is obvious that such a state of mind would prevent this writer from encouraging or dwelling upon the grounds of natural religion, while yet he himself is an example of that which we wish to illustrate, that those who have obtained the justest insight into nature have been in all ages firm believers in God.” This short sentence from Pascal seems to imply that he entertained views similar to those I have attempted to develope, and I cannot think he would have neglected Natural Theology, but he would have studied it in the light of revelation.

NOTE C.—Page 158.

The opinion stated so decidedly in the text, that the separate existence of the soul, and its immortality, were known only by revelation, may appear too positive. I have brought together three passages, two in favour of, and one against, my view in this note ; the reader must judge between them according to his knowledge of ancient history, philosophy, and theology.

In the first place Paley says—

“ Had Jesus Christ delivered no other declaration than the fol-

lowing—‘The hour is coming, in the which all that are in the grave shall hear his voice and come forth : they that have done good unto the resurrection of life, and they that have done evil unto the resurrection of damnation,’—he had pronounced a message of inestimable importance, and well worthy that splendid apparatus of prophecy and miracles with which his mission was introduced and attested : a message in which the wisest of mankind would rejoice to find an answer to their doubts and rest to their inquiries. It is idle to say, that a future state had been discovered already ;—it had been discovered as the Copernican system was ; it was one guess among many. He alone discovers who *proves* ; and no man can prove this point but the teacher who testifies by miracles that his doctrine comes from God.”

To the same effect is the opinion of Archbishop Leighton.

“ Many men have adduced a great variety of different arguments to support the conclusion that man is not quite extinguished by death, but removes to another place, and that the human soul is immortal. Some of these arguments are strong and solid, others, to speak freely, too metaphysical and of little strength, especially as they are obscure, as easily denied and as hard to be proved as when they reason from the immortal nature of the soul, or the nature of its operation as being confined to none of the bodily organs,—if these premises be denied, they cannot be proved easily. Let our belief of this immortality be founded entirely on divine revelation. If any one promises demonstration, he promises too much.”

On the other hand, Bishop Jeremy Taylor—

“ In order to his own glory and for the manifestation of his goodness, and that the accidents of this world might not overmuch trouble those good men who suffered evil things, God was pleased to do *two great things*. The one was ; that he sent his Son into the world to take upon him our nature, that every man might submit to a necessity from which God’s own Son was not exempt, when it behoved even *Christ to suffer*, and so to enter into glory. The other great thing was ; that God *did not only by Revelation* and the sermons of his prophets *to his church* ; but even to ALL MANKIND, *competently* teach and *effectually* persuade, that the soul of man does not die ; that though things were ill here, yet to the good who usually feel most of the evils of this life, they

should end in honour and advantages. And therefore, Cicero had reason on his side to conclude, that there is a time and place after this life, wherein the wicked shall be punished and the virtuous rewarded ; when he considered that Orpheus and Socrates, and how many others, just men and benefactors of mankind, were either slain or oppressed to death by evil men, (compare Heb. xi. 36—39,) and all these received not the promise. But when virtue made men poor ; and free speaking of brave truths made the wise to lose their liberty ; when an excellent life hastened an opprobrious death, and the obeying reason and our conscience lost us our lives, or at least all the means and conditions of enjoying them ; it was but time to look about for *another* state of things, where justice should rule and virtue find her own portion. And therefore, men cast out every line, and turned every stone, and tried every argument, and sometimes proved it well, and when they did not, yet they believed strongly, and they were sure of the thing, when they were not sure of the argument.”

CHAPTER V.

ON THE EMPLOYMENT OF THE TRUTHS OF REVELATION FOR THE ELUCIDATION OF NATURE.

The Physical Science of Scripture.

“The inditer of the Scriptures did know four things which no man attains to know, which are,—the kingdom of glory—the perfection of the laws of nature—the secrets of the heart of man—and the future succession of all ages.”—BACON.

ARGUMENT.—On the employment of Revelation for the elucidation of nature—Reciprocal aid of the two departments of study—Uses of hypotheses—Mode of applying revealed truth to the study of nature—Examples—Botany—The threefold division of plants—The seat of life—The specific unity of mankind—The law of storms—The science of mind—On the employment of final causes to advance science—Whence do we derive the knowledge of final causes.

THE general proposition established by the arguments of the preceding chapter being this,—that from the truths of nature may be derived essential illustrations of the spiritual things of God, reflections of his own nature, and indications of his purposes,—

the converse thereof may now be profitably discussed, namely,—that the study of nature may be itself aided and enlarged by the judicious employment of revealed truth to guide our researches and to provide us in many instances with a measure whereby we may test our conclusions. Our attention, whilst engaged upon the former topic, was chiefly directed to the agreement of certain great doctrines of revelation with nature, when deeply studied, in a proper light, and upon just principles. As we proceed to the latter, we shall find that as science advances we derive from it new and oft-times unexpected auxiliaries in the interpretation of scripture, a light reflected upon those subordinate and collateral subjects, which in almost countless number and variety are interwoven into the fabric of revealed truth. The two subjects are so intimately connected, that our knowledge of both advances together. However little the success may be which has hitherto attended the attempt to connect science with revelation, we are satisfied that the judicious employment of revealed truths would greatly aid the study of nature even for scientific purposes; and, on the other hand, ascertained truths of nature brought properly to bear upon the word of God, would help us to clear up difficulties, illustrate many points of interest, bring out obscure intimations into distinct propositions, and, in a word, would enable us more fully to understand and appreciate it.

Mistaken men indeed have so often employed the

language of revelation in vain endeavours to obstruct the advancement and overrule the conclusions of science, that many philosophers look with distrust upon every attempt to associate science with revelation, and they would discourage even any quotation of scripture in physical inquiries.

The abuse of a thing is no argument against its judicious use, and if some theologians have unwisely endeavoured to set revelation against science, many philosophers have as vainly attempted to set science against revelation; both being equally chargeable with unfairness, and both, we may add, have been guilty of an absurdity similar to that of one who should attempt to compare two volumes in different languages whilst unable to read either; for the former have usually been but poor theologians, and the latter mere smatterers in science. If discrepancies are discovered between these two parallel columns of facts, it seems but reasonable to inquire, first, whether we distinctly understand what the scripture actually says; and, on the other hand, whether our presumed fact in nature, which at first sight appears to oppose itself to scripture, be really based on the *sure ground* of induction, and not the mere offspring of our fancy.

It must be admitted that it was not the purpose of the word of God to supersede the diligent exercise of our own faculties, and to instruct us in all science. On the contrary, its language is often, for the wisest purposes, obviously, demonstratively, the wisest and best, accommodated to the sensible appearances of

things, which appearances have not stood the test of well-pursued and reasonable inquiry. Thus it was with respect to the figure of the earth, and the apparent motions of the heavenly bodies. So that astronomy may be considered as an illustration of scripture, by showing us how we must understand the texts which refer to the phenomena it has investigated. The same may be said of geology ; and when the true doctrines of this science are established as incontrovertibly as the theory of the earth's motion round the sun, the exact meaning of those passages of scripture which are now held to contain a system of cosmogony, together with the extent and results of the deluge, will be made out.

Thus upon these great points will the holy scriptures be illustrated by the progress of science, but the extent to which they may receive elucidation from the minute parts of nature, is at present incalculable. The naturalist who now is making up his lists and classifying the objects of his study, reckoning hundreds of thousands of species of organised living beings, plants, insects, animals, and endeavouring to ascertain the construction, mode of life, and every particular respecting each, whether it be a mere atom endowed with life, a moss, a forest tree, or the hugest of extant animals, or whether it be the spoils from the catacombs of an extinct world ; the chemist and the mineralogist, who deal in much the same way with inanimate matter, are *all* probably accumulating materials, which at some future period will be found

to furnish necessary and suitable types and illustrations of realities in the spiritual universe. Who can doubt, that many existences, and many acts and changes of living beings, apparently purposeless in creation, may have this as the great end of their being? To take a familiar and oft-used illustration, who can doubt it was the *intention* of the Creator that the transformation of insects—the changes undergone by one creature passing from the dormant life in the egg, through the crawling reptile, to be entombed in the chrysalis, and at last to rise and soar in a robe of beauty,—should be a type of man in his formation, life, death, and resurrection—and should demonstrate in all ages the accordance of the mystery of a future life made known by revelation with sensible events in nature.

It may be thought that this view of physical truths belongs rather to poetry, than to plain practical reason, and so indeed it may, but it is to that genuine poetry, which, springing from the depths of human nature, diffuses itself in a glow of almost supernatural light over every being in the universe of God, and to which truth is as essential as to mathematics, though of a kind and a reality more peculiarly its own.

But in a far humbler sphere, the progress of science might have been and may still be greatly aided by revelation, if its aid were judiciously sought and employed in a proper spirit. The limit of this work does not permit a full exposition of this sub-

ject, but a brief notice of a few points appears to be essential to the completion of my design. In order, however, that no questionable or mere speculative opinion should weaken the force of the illustrations, they will be confined to a few derived from past experience. Some of them have been already pointed out, others I have not met with, nor has the general inference I would deduce from them,—the rule for the future proceeding in this path,—to my knowledge been proposed.

The subject of the influence of revealed truth upon science, divides itself into two branches; the first referring to the general *facts*, or *laws* enunciated or assumed in the Scriptures; the second, to the information those writings have supplied to philosophers respecting the designs and ends, or *final causes*, of natural phenomena.

It requires but little acquaintance with science to understand the important uses to which *hypotheses* may be applied in its furtherance, so long as they are not estimated too highly, neither allowed to suppress or conceal the least fact when ascertained, or usurp the place of true inductive theory. An *hypothesis* is an imagined explanation of phenomena, which is no sooner made by a philosopher, than it leads him to inquire for more facts, to contrive experiments, to search for analogies, and, in a word, to test his *guess* by a comparison with as wide a range of nature as possible. Some of the most won-

derful discoveries have been at first but happy guesses or hypotheses. Thus, Newton's application of the law of gravity to the universe, was first held by him as an hypothesis, although upon examination, all the facts then known, and which have since been discovered, including apparent exceptions, have been found to be in accordance with it, and it is now held to be the true theory. In like manner, Dalton first made the conjecture, upon very slight grounds, that all inorganic matters capable of combining chemically, were united in definite proportions, and might be expressed arithmetically; subsequent researches have established this hypothesis as a general, nay, probably as an universal law. But many hypotheses have been framed, and for a long time held, exciting inquiry and leading to much discovery, which in the progress of science it has been necessary to abandon; but this is no disparagement of their uses, although it should be a perpetual warning against their abuse—against their being held one moment after they are fairly disproved.

The use to be made of these remarks in reference to the present subject, is this. There are in Scripture very numerous references to natural truths, sometimes in the form of distinct statements, but more frequently as incidental allusions. Now, admitting that it is not the purpose of Scripture to teach men natural science, granting that many of these allusions are adapted to ideas prevailing at the time they were

written, and since become obsolete; granting, further, that they are often but poetic figures; yet, when a positive statement is found, in clear and definite terms, which may be taken literally, or when a substantive fact appears clearly and immediately deducible from an allusion or a trope,—what objection can there be to such a statement or such a fact being held in reference to science as an HYPOTHESIS? Why should we not, in the absence of physical certainty and ere the subject is fully investigated, *presume* that the inference from Scripture may be the true theory—the general truth? There is always the danger of misinterpretation to be guarded against, but this should rather encourage the use of Scripture to this extent, because we must acknowledge the difficulties are considerable of exactly rendering an ancient language, where points of opinion merely incidental to its main purpose are in question, and we should not cling to suppositions, but should readily abandon our hypothesis when adverse facts are discovered, without imagining we thus disparage Scripture. Weak, indeed, must be the mind of the man whose confidence should be lessened in the veracity of Scripture, by finding that, in illustration of a topic, opinions were assumed which did not stand the test of the advance of science,—who would treat the historical work of a poet with contempt, because he had employed in his verse the image of the phoenix, or had spoken figuratively of the Earth, as immoveably fixed upon its firm foundations!

If the physical science of the holy Scripture always coincided with the opinions of the people to whom it was first communicated, it would not in the least weaken the evidence for its divine origin, or its claims on our unhesitating reception of its revelation of truths concerning invisible and spiritual things. On the other hand, if we find it contains anticipations of discoveries, reached only in modern times, and through much diligent, laborious, and combined researches, it adds much force to the evidences, it presents a new ground for our confidence and faith.

§ 1. The science of Botany will furnish us with the first illustration of the use which might be made of Scripture in promoting the progress of science.*

The profound and extensive investigations which have been instituted into every form under which vegetables are found to exist, have led to the conclusion that they have all been created upon three types or models. All the plants which clothe the earth or inhabit the waters, exist as three great classes; the plants of each class being peculiar—1, in their internal construction; 2, in their mode of propagation; 3, in the manner of their growth.

Thus, one great class of plants comprises all those species which are made up of groups of cells without vessels; have no flowers, bear no seeds, but are propagated by spores, or minute homogeneous bodies.

* Note B. chap. i. page 72, furnishes also a very striking example from Pathology.

This class includes all mosses, lichens, sea-weeds, funguses,—in one word, mosses and their allies.

Another great class, comprehends all plants which bear *grains* or fruit having but *one lobe*, (monocotyledons,) they grow by successive layers, deposited by their *vessels* within their substance. They are hence termed endogens, or inside growers, and they are properly known as leas or herbs. The grasses, ferns, palms, &c. belong to this class.

The third great class is made up of plants which produce seeds with *two lobes*, (dicotyledons;) these grow by successive layers, added to their substance externally; hence they are termed exogens, popularly cresses or plants. The timber-trees, fruit-trees, shrubs, and many plants of this country belong to this class.

The external or physiognomical aspects of these three classes, when once their organisations are known, are seen to be remarkably correspondent.

Now this generalization, which pronounces all the vegetables in nature to be formed upon but THREE types,—severally indicated by seed-bearing, grain-bearing, and seedless or spore-bearing plants, is the highest and most comprehensive truth to which the botanist has attained, a conclusion which it required centuries of study and research to establish. Yet this general fact was recognised, and the distinction of these three great classes accurately and properly set down by Moses, in the first chapter of the book of Genesis, when recording the history of creation,

verses 11, 12: "God said, Let the earth bring forth *grass*, (DESHA); and the *herb* (OESHEB) yielding *seed*; and the *fruit tree* (ETZ) yielding *fruit* after his kind, whose *seed* is in itself upon the earth. And it was so." And the earth brought forth *grass*, (DESHA,) and the *herb* (OESHEB) yielding seed after his kind; and the *tree* (ETZ) yielding fruit whose seed was in itself, after his kind."

The word DESHA, translated *grass*, meaning literally, *the springing or shooting plant*, as distinguished from herbs and trees, and the expression is remarkably appropriate and characteristic of the mode of growth of mosses, lichens, and funguses.*

Had this scripture statement been assumed as an hypothesis,—a probable general truth,—at an early period in the history of botanical science, who can doubt but that it would have greatly promoted its progress and facilitated its study? Why should we not, then, use in the same manner every similar scientific passage of Scripture?

§ 2. There is a positive assertion in the Pentateuch, upon a point belonging to the science of physiology, which has been the subject of long and laborious research and experiment in modern times.

In the institution of the sacrificial services, wherein the life of animals was taken away, as a significant symbol of the punishment deserved for sin, and the substitution of an expiatory offering,—a type of the atonement for all sin to be made by the death of the

* See "Outlines of Botany," by Gilbert T. Burnett.

Son of God,—the BLOOD of the victim, was ordained to be poured forth, offered to the Lord, and sprinkled upon the altar, the tabernacle, and all the people. In the mighty import of the acts thus enjoined, we see the fitness of the occasion for the declaration of a physical truth, anticipating the scientific inquiries of ages. The apostle, in Hebrews ix. verse 18 et seq., sets forth these acts and their meaning.

“ The first testament was not dedicated without blood. For when Moses had spoken every precept to all the people according to the law, he took the blood of calves and goats, with water, and scarlet wool, and hyssop, and sprinkled both the book and all the people, saying, This is the blood of the testament which God hath enjoined unto you. Moreover he sprinkled with blood both the tabernacle and all the vessels of the ministry. And almost all things are by the law purged with blood, and without shedding of blood is no remission.”

In order, then, to preserve the solemn impression of these significant institutions, it was forbidden the Hebrews to make the blood of animals a part of their food, not alone the blood of the *sacrifices*, which was set apart for sacred uses, but that of every animal slain and used by them for food. “ No soul of you shall eat blood, neither shall the stranger that sojourneth among you eat blood ; whatsoever man hunteth and catcheth any beast or fowl that may be

eaten, he shall even pour out the blood thereof and cover it with dust." And the reason given for these injunctions involves the physical fact in question—"FOR THE LIFE OF THE FLESH IS IN THE BLOOD," and "I have given it to you upon the altar to make an atonement for your souls, for it is the blood that maketh an atonement for the soul." Leviticus, chapter xvii., where, in the compass of a few verses, it is thrice repeated, "the life of flesh is the blood thereof." It is not our purpose here to pursue the spiritual meaning and application of this remarkable doctrine, but to point to the physical fact, which is again repeated, with a slight variation of phraseology, in Deuteronomy xii. 23.

Physiologists, up to a very recent period, have held the opinion that *life* could not be inherent in a fluid; they thought that some kind of mechanism only, constructed of solid materials could be so endowed. It was even much discussed, whether life might not be simply a *result* of a mechanical arrangement of matter, and not an endowment superadded to the material of which animal bodies are constructed. They would have made life to be only an action performed by a machine.

But recent investigations have proved that the doctrine, stated by the Hebrew legislator, and communicated to him by revelation, is the true theory of the *seat of life*. This mysterious endowment of matter, the phenomena, laws, and results of which constitute the most curious and interesting inquiry

which can engage the attention of philosophers, is thus declared to have its primary seat in the fluid which circulates in and pervades all parts of every living structure, to exist in the blood of all animals.

Had not men of science been too suspicious of the source of information offered them in the Holy Scriptures,—had they been content to entertain its assertions or allusions, merely as *hypotheses*, it cannot be doubted but that a crucial experiment would have been long since devised, to settle the question; and the discovery, upon the sure basis of induction of the true immediate seat of life, would have rewarded the research of the christian philosopher.

§ 3. The great diversities of bodily form, intellectual and moral condition and habits under which MAN is found in various countries, have not failed to excite the attention of naturalists. Looking at extreme cases, the Cape bushman, whose stature scarcely exceeds four feet, with his slender limbs, protuberant abdomen, small head, elongated lower jaw, solitary habits, and dulness of intellect; the European represented by the beauty and majesty of Greek forms; comparing again the mis-shapen Negro, black and woolly haired, with the slight and graceful Asiatic, to superficial observation it would appear almost inconceivable that man constitutes but a single species. It is not, therefore, very wonderful that the opinion that there are *many* species of men should meet with a ready acceptance, and that infidels should oft have triumphantly brought it as a fact into contrast

with the plain inferences from the scriptural narrative of the descent of all mankind from Adam. A deeper and more careful study, however, of the peculiarities induced, by climate, by the operations of many assignable causes, artificial habits, food, clothing, localities, and the like, sufficiently proves, that these are adequate to produce all the observed modifications. There is a law, extending to all the animal creation, that acquired peculiarities of individuals are transmitted to their offspring. An extensive and judicious collection of facts, drawn from the enlarged experience of recent times, now that every corner of the globe has been explored, has convinced naturalists that man really constitutes but a single species.

The specific unity of mankind, as we have said, appears to be implied in many passages of Scripture, and has been held as a doctrine by believers, in all ages, both under the Jewish and Gospel dispensations. Before the present conclusion of naturalists had been arrived at by the inductive process, and while the plurality of species appeared from reason most probable, many theologians attempted to escape the difficulty by alleging that the Scripture nowhere positively asserts the specific unity of the human family, that other creations of man, than the descendants of Adam, may have been made to people remote parts of the earth. This refuge was scarcely at any time needed, nor was it defensible, inasmuch as in the New Testament we find the unity of the

species very clearly stated by the apostle Paul in several passages, wherein he is showing the origin of sin and death, and their universal dominion, by reason of the transgression of man's common progenitor. In one passage the truth in question is employed by the apostle in a manner which should set at rest the discussion whether it be a scriptural tenet or not. It is his discourse at Athens. Acts xvii. 26. In the midst of the proud and conceited Greek philosophers, in the centre of their resplendent capital, in the presence of their noblest works of art and monuments of learning, the apostle proclaims the equality of all men in the estimation of their Creator, the identity of origin of themselves and the rudest barbarian they despised. "God that made the world and all things therein . . . hath made of one blood all nations of men to dwell on all the face of the earth." And the enunciation of this natural truth, we feel to be a most impressive and appropriate introduction to the humbling doctrine of the cross.

Whilst there remained any doubt upon the matter as it stood upon scientific evidence, it would, according to the principle we are attempting to establish, have been most reasonable, to have held the suggestion of Scripture of the specific unity of mankind as the most probable hypothesis, and the result of a complete investigation has proved this to be the true theory.

§ 4. "An attempt to develop the law of storms,"

has been recently for the first time instituted. The proverb which makes the Wind the type and illustration of all uncertainty and changeableness, has been hitherto universally considered to express a physical truth. It was supposed that the motions and currents of the atmosphere, whether constituting the gentle breeze of summer, the gale, or the hurricane, were no subjects for scientific inquiry, could be subordinate to no law, nor reduced to any system. This, however, now appears to be but the crude and hasty conclusion of ignorance. Subjected to a close examination, a collection of instances and a careful inductive process, the very first attempt to develop the law of storms has been attended with remarkable and interesting results, which bid fair to rival the most homely truths in practical usefulness. It is not possible, in the limits assigned to these illustrations, to exhibit a satisfactory account of this inquiry or its results. The reader is advised to turn to Col. Reid's most interesting volume if he would learn the particulars of this subject. For the present purpose it may suffice to observe, that in that work are numerous plates and diagrams illustrative of the course of storms, drawn from authentic information, and in all these the wind appears to be perpetually revolving in circles while it proceeds in an onward course. Thus the *whirlwind*, which was deemed a curious and somewhat anomalous phenomenon, is in fact a normal representation upon a small scale of all storms, gales, and hurricanes.

Much in the history of storms yet requires elucidation, but the simultaneous circular gyration and progression of the wind appears to be well established.

Now it may seem surprising that there is a distinct statement of Solomon upon this point, which, if a due regard were had to the physical truths of Scripture, would long since have aroused the attention of philosophers, travellers, and voyagers, and have excited this inquiry. The passage is, Ecclesiastes, chap. i. 6, “The wind goeth toward the south, and turneth about unto the north, it whirleth about continually, and the wind returneth again according to his circuits.”

Could the general fact be stated more explicitly or more accurately?

§ 5. If physical science might thus have received valuable aid from scripture notices, taken as hypotheses, how much more might the sciences of the Human Mind and of Morals have been advanced from the same source?

Superficial men, in every stage of an inquiry, and every state of science, are always ready to be self-satisfied, to believe they have reached the ultimum,—that their favourite subject is complete. To such men it will appear a remarkable assertion, that notwithstanding the labours of the great metaphysicians, who have studied these subjects, there are many indications that they are as *sciences* yet in their infancy. To suppose a system approaching completeness has yet been framed, implies a very super-

ficial acquaintance with the subject. Vast heaps of materials lie scattered about in various parts of literature, in poetry, in fiction, in history, in works on physical science, on medicine, and everywhere else where the impress of the human mind may be traced; these require to be gathered up, arranged, placed in due subordination to the leading principles, digested by a master mind, and the defective parts pointed out. It is easy to assign many circumstances which have obstructed metaphysical science, i. e. the science of mind and morals. The blind and indiscriminating admiration bestowed on great writers whose merits and errors have been confounded, stands foremost amid these causes. Thus Locke, great as he was, has more disciples for his errors than for his true discoveries. The school which opposed his errors, the chiefs of which were Reid and Stewart, fell into others of their own, and narrowed the field of inquiry, by asserting too much. Kant, who certainly accomplished a most valuable generalisation, has held his followers bound in a kind of mental thralldom. Then the weak and miserable scheme of the phrenologists has disgusted men with the very name of mental science; and again, the inane ravings of the socialists have made the word "morals," as applied to a theory of human sentiments, emotions, and principles, almost intolerable.

The spirit and tendencies of the age have so strong a bias toward the physical, the powers of

steam and its various applications, the ready and direct subserviency of geology and chemistry to the increase of wealth, (the idol of all men's worship,) all have an influence, by engrossing men's attention, in keeping back the development of the laws of our hidden nature, the exposition which will one day be made of intellect, feeling, and the links which associate men in society, the part of his being which distinguishes him from the brutes that perish.

In the meantime we should receive with gratitude every contribution to this great subject; and we venture to predict that the most fruitful source of principles, of general laws and influential truths, as well as of pertinent illustrations thereof, will be found in the Holy Scriptures.

In order to justify this anticipation, we would, first, refer to the fact, that it is to the Holy Scriptures we are indebted for a knowledge of the distinction which subsists between the two parts of our nature, respectively referred to the head and heart,—the aggregate of our intellectual powers and emotions. This distinction is now so universally recognised as to appear like an innate notion which no one can controvert, and thus is seldom referred to its true source.

We would, secondly, appeal to the student of metaphysics, who may be aware that the supremacy of *conscience* amid our moral powers, has been deemed a discovery in modern times, made by Bishop Butler, in whose sermons upon human nature it is embodied, but by him referred to its true discoverer, an inspired

apostle, (Rom. ii. 14,) the principle itself having precisely all the characteristics of a general law.¹

Thirdly, Let a comparison be instituted between the general rule of social conduct laid down by our blessed Lord, (Matt. vii. 12,) taken in all its fulness and depth of meaning, and the puny attempts of Bentham and his followers, to derive a rule from their principle of morals,—a principle albeit pilfered from scripture, but disguised in the garb of an absurd phraseology, lest its abettors should recognise its origin and renounce their infidelity.

Fourthly, Let the frivolous reasonings of the sensualists,² and the materializing puerilities of the phrenologists,³ be brought into contact and measure with the declaration in Job—"There is a spirit in man, and the inspiration of the ALMIGHTY giveth him understanding."

Fifthly, Let the meaning, scope, application, and end of FAITH, as it is set forth in the Holy Scriptures, be fully considered as it bears upon the processes of the mind, and compared with any or all the numerous works upon human reason and its presumed sufficiency for building up true science and accomplishing education.

¹ Dissertation by Sir James Mackintosh, prefixed to the *Encyclopædia Britannica*.

² Mills on the Human Mind, amongst others.

³ The author would not speak so contemptuously of a subject which many persons with a reputation for cleverness adhere to with a fondness which defies argument and sets at nought reason, did he not feel strongly that phrenology is a system of error;

Let the full weight and importance be given to those instances, and the considerations such comparisons must excite, and the principles we are attempting to establish,—namely, the justice and expediency of adopting statements, allusions, and hints from the Scriptures as *hypotheses*, to aid the progress both of physical and metaphysical science, must be conceded and approved.

The Second branch of this subject (the ministration of revelation to the advancement of science) relates to the information supplied to philosophers respecting the designs and ends, or final causes of natural phenomena. It is, as we have seen in a former chapter, from the consideration of final causes that nature has furnished us with a theology,—a body of truths respecting the Deity. But in the Scriptures we have an infinitely more precise, clear, and comprehensive system of truth relative to God and the purposes of our being, and the creation of all things visible and invisible, than our own researches could ever have elicited.

Can we, then, by a consideration of final causes advance our knowledge of nature? There has been some discrepancy of opinion upon this question.

a weak and futile attempt to explain the marvellous facts involved in the connexion of man's spiritual nature with his material organisation. Error perhaps never exists wholly unmixed in human systems, truth in some degree must be combined with it, but the connexion of phrenology with truth is by the flimsiest ties. In a future note a summary of the arguments for and against phrenology will be attempted.

On the one hand, Bacon* found occasion, from the practices of the ancients, to check and discourage the use of final causes in physical inquiry, yet not without distinguishing their abuse from the due and proper use which he would allow. On the other hand, many modern philosophers have admitted that a consideration of the ends, designs, and aims of phenomena frequently leads to scientific discovery. No one has stated this matter more satisfactorily than Professor Dugald Stewart.† “In the present age,” says he, “when the true method of philosophising in physics is pretty generally understood, it does not seem to be so necessary as formerly to banish final causes from that branch of science; provided always they be kept distinct from physical causes, with which there is now but little danger of their being unwarily confounded. If this caution be attended to, the consideration of final causes, so far from leading us astray, may frequently be of use in guiding our researches. It is, in fact, a mode of reasoning familiar to every philosopher, whatever his speculative opinions on the subject of natural religion may be. Thus, in the study of anatomy, every man proceeds on the maxim that nothing in the body of an animal was made in vain; and when he meets with a part of which the use is not obvious, he feels himself dissatisfied till he discovers some, at least, of the purposes to which it is subservient.”

* De Augment. Scient.

† Outlines of Moral Philosophy, § 283.

The consideration of the design and use of the valves in the veins, as is well known, led Harvey to the discovery of the circulation of the blood ; and recent investigations into the nervous system of animals, which have led to most brilliant discoveries, have been guided by a similar use of final causes.

Whilst, therefore, we are studying nature for the theological inferences to be derived from its truths, we are (so far as successful) obtaining a class of facts which may most advantageously be made to re-act upon science itself and promote its advancement. Thus, Natural Theology lends no slight assistance to other sciences, and in proportion to its own success will be the value of its aid. But we have already shown, that without revelation natural theology could scarcely have had a being, much less any soundness of growth, any well-knit proportions, any firmness of standing or maturity ; and it is therefore to revelation that we must refer, in the first place, as the primary source and spring of all our knowledge of design in nature, of intention, purpose, and aim displayed by our Maker, the Creator and Upholder of all things ; and, secondly, we must attribute to the same revelation all the advantage science may derive from the study of final causes.

CHAPTER VI.

CONNECTION OF THE PRECEDING DISCUSSIONS
WITH THE PROPER SUBJECT OF THIS WORK—
“THE GREAT PHYSICIAN.”

HAVING in the first chapter of this treatise shown generally how intimately Medicine is related to God's moral and spiritual government, we now further propose to display more particularly His ways, as they may be traceable in the institution, laws, phenomena, causes and consequences of diseases, and in the endowment of remedies.

But in pursuing this investigation, and attempting to deduce from this part of nature,—the province of the physician,—inferences respecting the Divine Nature or the principles of the Divine government, it would have been utterly futile to proceed in the manner adopted in other branches of physics; that is, to study phenomena and to collect instances of design and other indications of an Intelligent Originator, keeping out of sight the truths of revelation.

Without the previous information,—that God has revealed himself as the supreme object of love, of

obedience, and of worship ;—that man has disobeyed the divine injunction, and has consequently fallen from a condition of holiness, and forfeited his claim on the Divine goodness to happiness ;—that his Maker and Sovereign has proposed a covenant of reconciliation and restoration, and has appointed an elaborate and efficient system of means to accomplish this design of mercy ; and that although the source of all *efficiency* must be his own *sovereignty*, he has given unto Man's own hands many appliances, which make his restoration dependant upon himself. Without these and similar truths we could enter upon the Natural Theology of the Medical Sciences with no prospect or hope of success.

It has, therefore, been strictly relevant to our subject to precede it with a sketch of the principles of the Gospel revelation, and to lay a broad and sure foundation upon its evidences. Because, as we have also shown, a *primâ facie* view of disease,—i. e., physical evil,—would greatly confound our notions of Divine attributes and excite suspicions concerning His omnipotence or His goodness ; and should we even add to our inquiries into disease, the fullest considerations of remedial powers and agencies, we should scarcely escape the same confusion.

On the hypothesis of the Deist, who denies man's sinfulness, and excludes God's redeeming love and mercy,—whilst he admits his agency in creation,—we should find in the order, regularity, and laws of disease, deliberate and ingenious contrivances to

embitter the short span of existence allotted to man, an unnecessary increase to the misery of a being, who, having inwrought into his nature the capabilities of enjoyment and suffering, bodily and mental, too often experiences the preponderance of pain and anguish ; whose desires and aspirations for knowledge and immortality are ever frustrated, since he must contemplate extinction by a painful process at an uncertain period, ere his hopes have fructified or his best intentions can be consummated. Or if we must concede to the Deist a *rational* belief in a future state of existence, and admit that it is suggested, if not absolutely proved by nature, it scarcely renders our view of disease more explicable.

And then remedies and remedial powers furnish us at most with but limitations to the law of destruction, which not unfrequently prolong and aggravate affliction, checks which are but temporary, restoratives partial and restricted. Such perplexity must await us if we choose to admit but the one truth of the Being of God, and deny that he has made known his will and man's destiny by revelation.

But taking with us the truths made known to us by the Holy Scriptures,—that man is a fallen creature, a sinner against his Maker, now mercifully placed in a state of probation, subjected to suffering, pain, disease, and death, as a punitive and a corrective discipline,—that God has dealt with us, as beings possessed of a spiritual nature, bearing some likeness to his own nature,—that he has set before

us a hope “full of immortality,” and has pledged himself to co-operate with us in the necessary warfare with evil and endurance of suffering, which we have incurred through sin,—that in the person of the only begotten Son of God, the ETERNAL WORD, He has taken upon himself even our physical nature to accomplish our ultimate redemption from all pain and suffering, sorrow and distress ; taking with us these and other revealed truths relating to our nature, the character of God, and his righteous government,—we may hope to understand the *reasons*, meanings, nature, ends, and aims of the forms and modes of disease, and the extent and limitations of remedial powers and agents.

May we not, moreover, confidently expect that a correct knowledge of *final causes* may, by judicious and careful application, be made instrumental to the solution of many problems in science, elucidate phenomena, and lead to the discovery of laws in every branch of medicine? No branch of physics can compare with this in importance, in extent, or in diversity and multiplicity of principles. It involves, indeed, all science and all natural history, and to be completed must borrow aid from every quarter of the universe into which the human faculties can penetrate. Nor can moral or metaphysical truths be foreign to it, and Revelation may, without profanation, be applied to its advancement.

The general principles relative to the connection which subsists between Diseases and Remedies, and

the truths revealed to us in the Holy Scriptures, which in the further prosecution of this treatise are to be developed and illustrated, are as follow :—

Firstly, That in the origin, prevalence, and subsidence of epidemic diseases from age to age, we are furnished with proofs singularly appropriate and convincing, of the INTERPOSING PROVIDENCE OF GOD; proofs altogether different in kind from the evidence of His existence, and the intimations of the continual exercise of His agency, furnished by the contemplation of any other department of the material universe, and forming a link connecting to our apprehensions the ordinary influence of His hand in nature with the mysterious spiritual agency of His grace in the hearts of believers.

Secondly, That in the phenomena, causes and effects of the diseases to which the human body and mind are subject; the Power, the Wisdom, the Sovereignty and Judicial severity of God, are discoverable.

Thirdly, That in the limitations and restraints imposed upon diseases, and in the properties, distributions, and discovery of *remedies*, not only are we presented with similar proofs of the wisdom, power, and providence of God; but we can discover further manifestations of his character, namely, His discriminating benevolence, His merciful goodness, His boundless loving kindness to the human family; and we can, moreover, trace so close an analogy between this part of nature and the book of Revelation, the

scheme of man's redemption, as to afford a very striking and weighty argument that both are from the same source.

Fourthly, That there are certain facts relative to the variable prevalence and extent of human mortality, from which inferences appear to be deducible with respect to God's undeveloped designs, and man's future destinies, which may be compared with, and found to correspond remarkably with the declaration of prophecy—that in this class of natural facts, the will of God is manifested in such a manner as to correspond with revelation.

CHAPTER VII.

ON PROVIDENCE.

ARGUMENT.—The doctrine of an interposing providence, guarded by the principle of an apostle—Tendency of the human mind to superstition—To believe in supernatural appearances—How unsatisfactory these would be did they occur—Supposed visions and power of prophesying at the hour of death—An anecdote—Evils resulting from belief in sensible influences of evil spirits—Question concerning the nature and evidence of the agency of God in physical phenomena—Conflicting opinions—Evidence of providential interference from geology and the science of medicine, peculiar and satisfactory.

THE apostolic principle, (2 Cor. v. 7,) “*we walk by faith, not by sight,*” although most important to be held in view as a guide to our judgment in many perplexing incidents in a christian course, is not to be accepted as absolutely universal. Like other passages of Scripture which appear to announce general principles, it must not be its own interpreter—but it must be compared with other portions of holy writ, and then it will be found to be

modified and restricted, it is also to be further limited by the recorded experience of God's people and the divine promises. Nevertheless, the human heart in its natural condition is prone to the opposite error, is ever disposed to seek for satisfaction of its doubts and assurance of its hopes, in some sensible communication with the unseen world. The infidel says, broadly, my unbelief would be at once overcome, could I but see a spiritual being, and hear from him the secrets which are now concealed from me;—let a miracle be wrought to convince me,—show me a sign that I may believe. And many, very many highly favoured Christians—in whom the Spirit of God has well nigh overcome the carnal law of the members, the enmity of the natural man, have exhibited the lingering remnant of that corruption, which is only to be entirely subdued when mortality is swallowed up of life, by a credulity, which, if carried out to its legitimate consequences, would entirely annul the principle of faith, and render useless the greater portion of the recorded will of God. They have been disposed to believe every *rumour* of supernatural communication from the spiritual world, as if some such manifestation were still needed to confirm men's faith, that God sometimes interposes, or permits his holy angel visibly to interfere, at least for his people's good. Whereas, it is most certain that the *unseen* agency of the Spirit of God, the ministration of angels altogether *unrecognised by sense*, must be abundantly sufficient for the needs of

mankind in every emergency. The great consummation of the sensible intercourse of God with his creatures, the incarnation of the Son of God, has placed the object of faith upon such a basis that there would appear no more necessity for sensible, supernatural interferences in the current of human affairs.—“If they believe not Moses and the prophets”—with the now, in these latter days, graciously superadded testimony of the Son, his holy Apostles, and Evangelists; “neither would they be persuaded though one rose from the dead.”

It is a mistake to suppose that the human mind and heart rest with more satisfaction and confidence upon truths known through the medium of sense, than upon convictions of the understanding derived from testimony. An extremely happy and very unusual concurrence of mental acquirements and qualities of heart, is necessary to constitute men competent witnesses to extraordinary events. Our senses are so easily imposed upon, and the judgments derived from them perverted, that the most clumsy jugglery is sufficient to deceive the multitude, and an easily acquired dexterity suffices to mislead the more refined and educated. Hence it is, that men tacitly prefer the report of others whom they deem duly qualified to observe occurrences out of the limits of their own experience—although they will not often avow such a preference—but they have rather a pride in maintaining their own infallibility, where self-interest is not too deeply involved for self-trust.

Such contradictions are there in human nature, that the due selection of supernatural events to open the invisible world to our faith, and the preparation of competent witnesses to record and communicate them, must equally be the result of the divine agency. For as men have ever been over-credulous and absurdly deceivable, so have they been unreasonably suspicious, when really miraculous events have been presented to their senses. When a voice came from heaven in answer to the prayer of our Lord, "Father, glorify thy name!" and in the hearing of many it was answered audibly, "I have both glorified and will glorify it again,"—we are told that the people *that stood by and heard*, said that it thundered! A right state of mind in reference to the judicious reception of testimony, and the rejection of deceitful impressions on our own senses, a suspicion of self, a confidence in appointed witnesses, a discriminating faith, are evidences of holiness of heart, and like every similar grace, are gifts of God. "Because thou hast seen me thou hast believed," said our blessed Lord to the incredulous apostle; "*blessed* are they that have *not seen*, and yet have believed."

The history of the Israelites (from which much knowledge of every kind concerning our common nature may be derived) furnishes us with many illustrations of these truths.

When the law was delivered amid the wonders of Sinai, by the voice of God, although the fears of the

people were allayed by assurances of their safety, they yet, nevertheless, requested most earnestly to be spared the sensible and audible communications of the Deity, they intreated that they might receive the divine laws and ordinances through the intervention of a *mediator* ; they said to Moses, “Go thou near, and hear all that the Lord our God shall say ; and speak thou unto us all that the Lord our God shall speak unto thee, and we will hear and do it ;” and continues Moses, “the Lord heard the voice of your words when ye spake unto me, and the Lord spake unto me, I have heard the voice of the words of this people which they have spoken unto thee, they have well said all that they have spoken. O that there were such an heart in them that they would fear me and keep my commandments always, that it might be well with them and with their children for ever.”

Again and again, whilst the whole people were witnessing signs and wonders, miraculous supplies of food, bread from heaven, water from the rock, in the presence of the pillar of cloud or fire, from whence the voice of God issued, did they murmur at the dispensations of his providence, and rebel against the divine will. Neither the severest judgments, as in the rebellion of Korah, nor the most signal mercies, as in the suspension of the course of the sun and moon for ensuring their success in battle, made any permanent impression, or saved them from falling into idolatry. Their whole history is a con-

tinued denial of the efficacy of sensible communications to produce steadfastness of belief, or to ensure righteous conduct. But after the withdrawal of the SHECHINAH,—the visible glory and presence of God, and the suspension of the prophetic office, the whole nation renounced idolatry; and they have ever since, even to this day, adhered steadfastly to the doctrine of the spiritual nature and unity of God, they have been willing to receive these truths upon testimony, and *so far* to depend exclusively upon faith.

Unless, indeed, we could live in constant intercourse and habitual converse with spiritual beings, and if we had experienced only one such communication, however remarkable the occasion, or striking the circumstances attending it, it is our nature to have the satisfaction and assurance of its verity gradually diminished. Our memory is so imperfect, that the lapse of time affects everything stored within it, as it does the natural landscape, and the most beautiful and notable works of art, destroying the sharpness of outlines, the minute and distinguishing parts, denuding substances of form, and reducing all to shapeless masses, our advancing experience of the deceivableness of our hearts, and the readiness with which the materials of our dreams, both sleeping and waking, mix themselves up with our remembrances, give us less and less confidence in long-passed sensible experience. Whereas, the records of Revelation, the sustenance of our faith, are an everlasting and unchangeable standard for refer-

ence and correction. Hence, doubtless, the apparent paradox of the apostle, who, when referring after a lapse of some years, to the most glorious vision ever vouchsafed to mortal eye, witnessed by himself, as an evidence of the “power and coming of the Lord Jesus Christ,” says, “We have also a more sure word of prophecy, whereunto ye do well that ye take heed.”

Still it returns upon us, that it is a question, not of opinion but of fact, whether there is or not, ever any sensible communication held between man and the Supreme Being, his holy angels, the spirits of departed men, or any other spiritual existences. The time has not long gone by when a negative answer to this inquiry would have been held to indicate a degree of scepticism allied to atheism, and even yet there are several forms under which an opinion of the affirmative still lingers. If true, although simple-minded, Christians, have been disposed to listen with complacency to spiritual interferences with the course of nature and visible interpositions for the purpose of converting individuals, distinguished for usefulness, the learned have not been altogether free from the like superstition. It has been an opinion derived from a remote antiquity, and sanctioned by many great names among the moderns, that at the near approach of death, and just before the separation of the spirit from the body, an intercourse is opened with the spiritual world, that angels good or bad, or spirits of departed relatives, hover around

the death-bed, and impart to the dying a foretaste, while yet an inhabitant of this world, of the joys or sorrows of the next, give him a glimpse of the future, impart to him the power, and permit him the opportunity to exercise the gift of prophecy. A distinguished living physician, Sir Henry Hallford, has introduced this subject into one of his interesting and elegant essays, and has referred the origin of the opinion to the scriptural narrative of the death-bed of the Patriarch Jacob, who thereon prophesied concerning his sons' future fate and fortunes. "The pride of human nature easily disposes it to appropriate to itself extraordinary power; and that which was peculiarly vouchsafed to the sanctity of the patriarch and prophets of God may have been assumed to be privileges of mankind universally in the hour of death." He traces the opinion, as adopted by the Greek physicians, and transmitted down through the Greek and Roman poets, orators, and historians, and expressed in many passages of the most illustrious of modern poets. The wounded and dying HOTSPUR exclaims,

" O I could prophecy !
But that the earthy and cold hand of death
Lies on my tongue."

SHAKSPEARE'S HENRY IV.

Sir Henry's own explanation of the admitted facts of expressions often escaping the lips of the dying, which seem to imply the possession of the faculty

of vaticination is, that “ It does not seem necessary to ascribe to persons, under such circumstances, a supernatural power. We have all observed the mind clear up in an extraordinary manner in the last hours of life, when terminated even in the ordinary course of nature, but certainly still more remarkably when it has been cut short by disease, which had affected for a time the intellectual faculties. We have seen it become capable of exercising a subtle judgment, when the passions, which had been accustomed to bias and embarrass its decisions whilst they existed, were extinguished at the approach of death; when the inferences which wisdom had drawn from experience of the former behaviour of men, were now made available to a correct estimate of their future conduct, in the sense of Milton’s lines,

‘ When old experience does attain
To something like prophetic strain.’ ”

This explanation will not apply to such cases, as the following; and similar ones must have been witnessed by most physicians. A little girl, not more than seven years of age, was suffering from scarlet fever; the disease was severe, and the symptoms of a fatal inflammation in a vital part set in as a sequel immediately on the subsidence of the eruption, which resisted every remedy. On her mother returning to her apartment after a short absence, she found the delirium under which she had laboured had apparently subsided, and she spoke in a calm

collected manner : “ Mother, I am about to leave you—and am going a long journey; my little sister, who is dead, has been here upon my bed, to take me away, and I am going with her. Good-bye, dear mother.” On being questioned, she repeated that a little girl, whom she knew to be her sister, had actually been with her, to take her away. The mother stated that the deceased child had been dead before her sister could have known it, and that she had not been in the habit of speaking of it before her. The little girl died the same evening. Such instances as these bid defiance to all our philosophy.

At an early period of my own professional career, and in spite of prepossessions, I could not entirely satisfy myself of the fallacy of the old opinion, and therefore wrote in my common-place book the following, as a query. “ If there be any reality in the belief once so universally held, that there may be occasional communications between this world and that invisible sphere where spirits dwell, the physician is the most likely person to detect and investigate the interesting truth, because he is best qualified to discriminate between the natural and preternatural in presumed cases. For occasion of religious instruction, certainly our Lord has himself told us there is no need of such intercourse,—the Word of God alone is sufficient; but there are still many points of view in which we may contemplate the possibility and utility of spiritual communications.”

Such suggestions as these flit across the mind in

the solitary day-dreams and midnight reflections of youth, but vanish in the light of reason and experience, and the steadfast looking upon evidence practised with advancing years.

Another form of Divine interference and sensible manifestation to which men ever listen complacently and are prone to believe, is that of miracles, especially miraculous healing. Some, *deceived* by their own imaginations, or willing to *deceive* others, claim the possession of this power from heaven. The subtlety of the energies of life with their mysterious though partial subjection to moral and mental influences, give origin to “signs and wonders” to support these pretensions. We are even now perpetually witnessing the revival of spurious miracles, which mislead many. The Christian will be preserved from this delusion by simply keeping in mind the great purposes miracles subserved in the Divine economy, and the limitation it pleased God to impose upon their exercise, and that they were never wrought for their own sake, but for an ulterior purpose or end. During the formation, so to speak, of the Old Testament, miracles attested the authority of the actors in the historical events, and the writers who recorded them. After its completion they were suspended, and four hundred years elapsed ere the occasion arrived for their revival. Whilst the transactions which introduced the new covenant of the gospel were in progress, and until they were committed to writing, with the completed messages o

Divine grace, miraculous powers were again bestowed upon the chosen penmen, and then finally withdrawn. Thus, whilst they were essentially necessary to establish the authority of the records of revelation, they would be purposeless if continued afterward. Miracles are not adapted, in the nature of things, to be a continued means of religious instruction. It is obvious that frequent repetition would destroy their influence, or make it necessary that each should be more wonderful than its precursor, and then they would altogether annul the operation of moral motives, startle men from the course of their duties, and keep the world in perpetual agitation.

Thought recorded in writing is a perfect means of transmitting truth from age to age. When emanating from man alone it is everlasting, surviving the obliteration of empires, and is the only indestructible monument he can erect. Hence, in accordance with the principle of limitation treated of in a former chapter, it was the means chosen by God to instruct mankind. And as in His Book is contained the wonders of His nature, the secrets of His will, and the destined end of mankind, it was a purpose worthy of so distinguished an attestation, as is furnished by miraculous interposition, to establish its authority upon an immutable basis. The miracles of our blessed Lord and his apostles were wrought only for this adequate and appropriate end. Thus we find that *He* by whose hands God wrought special mi-

racles, from whose body “handkerchiefs and aprons were brought into the sick, and the diseases departed from them,” could not to gratify his own private affection, nor even to advance the cause of Christ in his *own* way, recover his friends from their sickness or infirmities. The dangerous illness of Epaphroditus, which touched the apostle with the keenest sorrow, the oft infirmities of Timothy, for which he recommended the use of a common remedy, and his fellow labourer Trophimus, whom he left at Miletum sick, whilst his own necessities seemed to need his presence, are instances full of profound instruction.

To every modern story of miraculous interposition and of open vision, however apparently authenticated, and whatever may be its alleged purpose, we may fairly oppose the apostle’s principle, “We walk by faith—not by sight.” And if this principle precludes the expectation of God’s visible interference for purposes of benevolence, much more must it apply to every alleged instance of the exercise of open mischief by the father of evil, the great adversary of God and man. The full extent of the evil which results from forgetfulness of our dependence upon faith alone, to the exclusion of sight in things spiritual, can only be appreciated when we become conversant with the popular belief and practices of the middle ages, and the strange infatuation which possessed men’s minds almost to our own times concerning witchcraft and demoniacal possessions. Men

deeply imbued with learning, and alive to the true spirit of modern science, whose characters we revere, and whose lives we admire, gave implicit credence to the most absurd and improbable inventions, and allowed their human sympathies, and even their christian charity, to be stifled toward the most pitiable of the human race. These narratives ought to be preserved, in order to teach every succeeding age a great moral lesson, namely, the power of conventional prejudices over minds of every capacity and every quality. To these idols of every age "the mean man boweth down and the great man humbleth himself." The manner in which men of general intelligence dealt at that period with evidence was most remarkable, for now that the mist of prejudice upon that subject is removed from our understandings, the more these instances of witchcraft and demon-work, which commanded almost universal and implicit belief, are attempted to be substantiated by circumstances of names, dates, and localities, the more certainly and satisfactorily are they proved to be the creation of a disordered fancy. We must not, however, too hastily infer, from our present exemption from this error as a popular prejudice, that mankind has grown too wise or too far advanced in physical science for such absurdities ever again to acquire dominion over society. For, as if to demonstrate the fallacy of such an opinion, to humble the pride of modern science, and to manifest the universality of the "deceivableness of unrighteousness," many

circumstances have been witnessed of late which have seemed to threaten its revival in all its pristine horror. Thus, a mental and nervous delusion of a few weak people, which led them to rave in an unintelligible jargon, gave rise to a belief in others as weak, that they listened to unknown tongues, as signs from God ; whilst others denounced them as sensible manifestations of the devil. Then came, in the very bosom of an institution framed upon the newest model for the propagation of knowledge, an attempt to revive a portion of the old demonology in as puerile and degrading a form as ever,*—and at this time its congener Mesmerism,† a miserable, but certainly a *human* folly, has excited suspicions that it may be the work of Satan openly displaying himself.‡ Alas ! alas ! we have abundant proofs that mankind has not yet outgrown its follies !

It is no denial of the fearful doctrine of the existence, power, malignity, and personality of the spirit of evil, or of his agency in the sins and evils which afflict mankind, to reject entirely those superstitions. We cannot keep too closely in view the scriptural truths concerning this unseen yet vigilant adversary, to escape by the strength of God's grace from his thralldom ; but when we are delivered from these “ doctrines of devils,” these fears of his visible and bodily presence, we are left free to the exercise of

* See *Lancet*, No. 801, Jan. 5, 1839.

† See note at the end of the chapter.

‡ Sermon by the Rev. H. M'Neile.

faith in our spiritual warfare, and calm inquiry into the evidences of spiritual existences and agencies, and whether the relations and actions of things in the material world furnish any traces otherwise than by way of analogy of things unseen.

And when we reject entirely all reports of modern miracles and visible interposition of God in favour of individuals, and pronounce them all to be fallacies and the offspring of superstition, we do not deny, or throw any doubt upon the fact of the superintending Providence of God; on the contrary, it becomes a matter of deeper interest to inquire whether there be any evidence discoverable in nature, and apart from the assurance of faith, of the divine interference, and whether there be any proofs that the course of nature requires and receives the interposition of the hand that primarily formed it, and in what part of nature it may be found.

This inquiry, which involves the consideration of some of the profoundest questions in physics, such as the nature of causation, the ground and meaning of laws, and also in mental philosophy the source and exact character of our notions of power and efficiency, has been pursued with becoming earnestness, and in reference to mechanical, chemical, and organic phenomena, two answers have been returned to the question.

On the one hand, it has been said, that at the beginning God endowed the various substances which make up our world with certain properties, impressed

them with certain laws, arranged their respective quantities and localities, and then left them to work out in accordance with those laws the results which we witness, that there is no room left for his subsequent interference, no requirement for any change, adjustment, or correction. This view of the matter, it must be admitted, has been especially adopted and patronised by many, both in ancient and modern times, who although compelled to acknowledge the existence of God and a beginning to creation, are nevertheless desirous to escape from all apprehension of moral responsibility, and therefore frame to themselves a creed to correspond with their wishes. Hence it has been held up to ridicule by the christian poet.

“ Some say, that at the origin of things,
When all creation started into birth,
The infant elements received a law
From which they swerve not since. That under force
Of that controlling ordinance they move,
And need not his immediate hand who first
Prescribed their course to regulate it now.
Thus dream they, and contrive to spare a God
Th’ encumbrance of his own concerns, and spare
The great Artificer of all that moves
The stress of a continual act, the pain
Of unremitting vigilance and care,
As too laborious and severe a task.” *

But this same opinion has been avowed, as the result of calm philosophical inquiry, by others of high

* Cowper.

authority as christian writers. “ I must profess it as the most reasonable supposition,” says one, who is earnestly endeavouring to reconcile the truth of the Scriptures with modern geology, “ that God originally gave being to the primordial elements of things, the very small number of simple bodies, endowing each with its wondrous properties. Then, that the action of those properties in the ways his wisdom ordained, and which we call laws, produced, and is still producing, all the forms and changes of organic and inorganic natures.”*

On the other hand, from a deep consideration of causation, and from our total inability to understand the mutual action and re-action of the several kinds of matter, or to conceive efficiency an attribute of any thing save mind, every action and operation, every change and every subsistence, has been attributed to the immediate exercise of the Divine agency. “ A law,” it has been said, “ supposes an agent and a power, for without the presence of such an agent, of such a power, *conscious* of the relations on which the law depends, producing the effects which the law prescribes, the law can have no efficacy, no existence. Hence we infer that the intelligence by which the law is ordained, the power by which it is put in action, must be present at all times and in all places where the effects of the law occur, that thus the knowledge and the agency of the Divine Being pervade every portion of the universe, producing all

* Dr. John Pye Smith.

action, all passion, all permanence and change. The laws of nature are the laws which he in his wisdom prescribes to his own acts, his universal agency, the only origin of any efficient force.”*

“The student in natural philosophy,” says a learned prelate, “will find rest from all those perplexities which are occasioned by the obscurity of causation, in the supposition,—by far the most simple and sublime account of the matter,—that all the events which are continually taking place in the different parts of the material universe, are the immediate effects of the divine energy.”†

Both these views appear to labour under most serious difficulties, and both will, it is conceived, be found even upon a slight examination to be inadmissible, at least relatively to human conceptions of truth. If the former, by denying the immediate agency of God to be ever needed in the material universe, would include the government and direction, the progress and the changes observed among organised living beings, it may be refuted by unequivocal evidence of an interposing intelligence.

It is true that the physical properties, the forms and chemical affinities of the elementary substances composing our earth, their quantities and relative adjustments, are fixed and permanent. It cannot be discovered that any new law has been added since their first creation, or that any change has been made in any law then established. This permanence and

* Whewell.

† The Bishop of London.

uniformity of the laws which regulate the inorganic elements, inasmuch as they were originally instituted in perfect wisdom and with unlimited power, excludes the necessity for any interference,—they require no alteration, addition, or adjustment. We therefore cannot find in them any evidence of providence; it is the same to our notions as if God had withdrawn himself after their first institution; unless, indeed, we admit the second opinion, and consider ourselves justified, from metaphysical considerations, to conclude that God is the immediate agent in the production of physical phenomena; but this supposition labours under the fatal objection of making the Deity the immediate cause and author of evil as well as of good. We may by faith recognise the hand of God in the lightning, his voice in the thunder, and his agency as Supreme in everything, without supposing his energy therein to be identical with the physical forms of nature. Such an opinion places God in a situation of literal servitude to man; for, according to this supposition, God must himself be the prime mover of every piece of machinery constructed by the hand of man, as the watch, the steam engine, and indeed every other mechanism, since they universally depend upon a force imparted by some property of matter. It makes God the immediate actor of every sin, if it does not confound his being with matter and force, and thus degenerate into Pantheism. The propounders of this hypothesis would never, of course, admit these

inferences; they would at once, if challenged, repudiate these consequences of their doctrine, which, nevertheless, seem to flow necessarily from it.

The difficulty which these hypotheses have been framed to solve arises, as has been said, from our inability to comprehend the nature of causation, to discover wherein power or efficiency consists. All that we can perceive by the most careful scrutiny in any two events, which are said to be cause and effect, is antecedence and consequence—we have an intuitive notion of some virtue or power in the cause to produce its effect; but we cannot, upon analysis, discover such a power in any cause, which lies within our sphere of inquiry. Thus to take the simplest case in nature, we cannot tell why the impulsion of one substance upon another should produce motion; we know it does so, but cannot trace the power by which it is done. And it does not diminish, it rather increases the difficulty, when we consider that affections, or changes in mind, are followed by changes in matter, as cause and effect; thus when we simply wish to remove a thing from one place to another—this mental state is followed by the necessary acts of the body, and the thing is removed. The impulsion of matter upon our senses producing sensation and perception; indeed, every point in the intercourse of matter and mind, and between minds—matter ever intervening—is beset by the same difficulties. Shall we attempt to escape from these by supposing that there is no substantial

reality—or rather no materiality in surrounding things—nothing but mind—and that all the phenomena of the universe are but affections of mind, acts of thought, reciprocity of ideas and emotions? Such is Bishop Berkeley's system of idealism. Or shall we listen complacently to those sublime speculations which have been framed to solve the difficulties of causation, perception, and the rest of the intercourse of mind and matter, by supposing God to be both the *object* and *subject* of all physical phenomena? or, to use the explicit phrase of its author, the justly celebrated Malebranche, “that we see all things in God?” or the still more ingenious and remarkable hypothesis of Arthur Collier, who would adopt the literal meaning of the expression, “that God erected all things in Christ!” The same objections which have been made to the opinion advocated by the Bishop of London equally apply to these, excepting, perhaps, the first, which does not, however, touch the present question, at what point in nature can we discover the divine interposition?

Whatever may be the manner in which the agency of God is exercised over inorganized matter, it is certainly concealed from our view by the intervention of *second causes*; and the like is true of all the ordinary laws and phenomena presented by the organic creation.

It has, however, been alleged,* that in the propagation of successive generations of animals, and more

* By Dr. John Macculloch.

especially in the production of minds, which we are continually witnessing, we have a sensible proof of the operation of the Deity, without the intervention of any adequate second cause. Now, although it is quite true that we are entirely ignorant of the manner in which these wonderful results are accomplished, we are quite sure that there is annexed to every organised being, a more or less complicated mechanism, wherein the production of its own kind is effected ; but because we are ignorant of the process, and cannot, in the present state of science, trace the immediate agency of the physical cause, we surely are not warranted to deny its existence, and to suppose the analogy of all creation, is at this point violated. We have no ground for believing that the interference of the supreme intelligence is, in a more especial manner, required for the propagation of animal life, either of the lower creatures, or of man, endowed as he is with mind, than in the formation of a new substance from the union of two or more simple elements, by chemical affinity. That man possesses an immortal spirit, deriving its existence from the Father of spirits, is, as has been shown in a former part of this discourse, a revealed truth recognised only by faith, and the fact, therefore, of the propagation of the species, cannot, on that account, be adduced as furnishing any peculiar sensible evidence of the exertion of divine power.

But the investigations of geologists have brought forward a new and most interesting description of

evidence, to prove the continued interposition of the Divine Being in the affairs of this world, which amounts almost to a demonstration. They have shown, that amid the revolutions and changes which are incessantly proceeding in the structure of the earth's surface, the upheaving of deep-seated matter, the denuding and wearing down of the higher parts, the shifting of the relative position of sea and land, the formation of new strata by the agency of the ocean, of earthquakes, and of rivers, acting upon materials derived from the old ; all proceeding according to fixed and immutable laws, there is no permanence in the species of living organised beings which inhabit that surface. From the remains of animals found imbedded in the various strata, compared with those at present existing, it is evident that many species, which formerly covered large areas, and abounded, have been extinguished, and that new species have been created to supply their places.

The minute acquaintance to which naturalists have attained in comparative anatomy, and other parts of zoology ; and the care, industry, and skill, with which this knowledge has been brought to bear upon geology, renders it perfectly impossible to refute the evidence they have adduced by any general reasoning. That many species of animals have become extinct, and these not minute creatures, whose living representatives may have escaped the eye of naturalists in some obscure corner of the globe, but of huge beasts, both of the land and waters, we are

able to see by the specimens stored up in our museums—a very slight knowledge of natural history sufficing to satisfy us that no similar creatures can be found in a living state at present. And it has happened most curiously, that the termination to the existence of one large species, a bird (the Dodo) has fallen within a period so recent, that we have prints representing it in a living state in old travels; we have a portrait taken from a living specimen, and even portions of a skeleton, the skull and a leg, preserved almost miraculously, (if such an expression may be permitted,) to attest the wonderful and interesting truth, that in the economy of creation the duration of species is limited, as well as that of individuals.

The proof, indeed, that the creation of new species has gone on progressively, as the old have been slowly and gradually destroyed, is not quite so simple and obvious to the unlearned in geology. No instance can be adduced of one occurring within the historical period. It may be that man has been the latest; he is clearly so of the larger and more conspicuous creatures, and naturalists have certainly not been long enough acquainted with the smaller and less obvious, nor are they even yet sufficiently conversant with every species of living creatures to discover, whether any act of creation of this kind has been performed since man was made an inhabitant of the earth. But of the comparatively recent addition of the human species, to the numer-

ous forms of animal life now existing, there can be no doubt. Nor can we reasonably refuse to yield our belief to the assertion of the geologists, that the work of creation, so far as regards animals and plants, is proved by the records laid up in the strata of the earth, to have been progressive. Now, as soon as they can prove that there was a time when any given species of living beings did not exist, and then, that it was afterward brought into existence, it must follow, that a precisely similar cogency of proof lies in their data, for the interposition of the Deity, for the providential interference of the same hand that originally framed the world—that an intelligence to devise and a hand to execute the construction of the new animal mechanism must have been employed in the production of this effect. For we are perfectly certain,

1st. That there can be no spontaneous generation of new creatures.

2nd. That no action or combination of inorganic elements, acting under physical forces, can produce an organised being.

3rd. That no power exists in any living beings, or in any combination of any two or more of them, to produce a new species.

4th. That the nature of our earth, as a planet, floating freely in space, precludes the possibility of the introduction of new species from any other part of the universe.

5th. That the several species of living creatures,

by a fixed limit and law, cannot, by any lapse of time or change of circumstances of any kind, be transmuted into any other species.

There is, however, this defect in the evidence for the interposing providence of God, derived from these truths of geology, that it can be literally *known* only to a few, since it requires in those who would witness it, no slight extent of scientific knowledge. To the many it must ever remain, like so many of the most interesting conclusions of science, a matter of faith—a truth received upon testimony, and may therefore be supposed, as indeed it is in fact even now suspected to be by many, a debatable topic, resting upon the authority of men liable to error, and perhaps only awaiting the discovery of some new fact, to be disproved and consigned to forgetfulness.

By others, however, who are familiar with the process of induction applied to any department of nature, and who are informed that it rests upon the sure ground of induction carefully applied by the geologist, it will be received as a well-established truth, even although they may be themselves unable to test the evidence upon which it is founded. The fact of successive creations, at long intervals, furnishes a remarkable example of discoveries in nature suggesting the true translation of a passage in the sacred records, which had been previously* almost universally misapprehended. And if it be not a *sensible* proof of the Divine interposition, it is the

* Gen. i. 1.

nearest approach to such a proof discoverable in any part of nature, the reasoning process being so short and obvious. There is, however, another part of nature which furnishes us with proofs of the providential interference of God, equally cogent and striking with geology ; proofs so readily apprehended as to challenge the belief, and influence the conduct, of all mankind ; and which yet have not been set forth in connexion with the theological doctrines they are calculated to elucidate.

These are to be found in the *origin, progress, and history of Epidemics and New Diseases*.

It may be proved by historical and certain evidence, that from age to age new diseases have arisen amongst mankind, have prevailed, extended, and followed such laws, as manifest them to have been the production of an intelligence which designed them to subserve his own purposes of wisdom, benevolence, or judgment, and that from the circumstances attending their origin, we are certain that they are new creations,—and therefore proofs of interposing providence, sensible manifestations of Deity, demonstrations of the continued watchfulness of the Creator over the affairs of men.

That diseases are specifically distinct and separate existences not transmutable one into another, any more than are species of animals, is perfectly certain. Although we cannot, in the present state of our knowledge, always discriminate species from varieties, but as science advances we are able to

identify distinct species in supposed varieties, and on the contrary, to resolve into the same species many supposed to be distinct; a perfect classification, as has been before observed, cannot at present be even hoped for. Yet, nevertheless, there have been such clearly marked differences between such diseases as have been superadded as time has elapsed, that we are in no danger of confounding them with any that had previously existed. Small pox, Measles, Spasmodic Cholera, and many others, are so strikingly peculiar and dissimilar, that it does not require the learning of the profession, the most ordinary observer is able to discern their peculiarities, and totally distinct specific characters.

Now almost every age has witnessed this production of a *new* disease, which has thus been made a standing evidence of the existence of an intelligent Creator. But inasmuch as the general tendency of the human mind has not been to deny the existence, but rather to forget the claims of its Maker, men have often been aroused from their apathy and indifference, by the prevalence of old diseases which had for a period either entirely slumbered, or existed only in single detached cases lightly sprinkled here and there in many places, thence termed *sporadic* diseases, or existing in some locality, as an effect of some poisonous peculiarity of the soil or country, i. e. *endemic*, but which, at the bidding of the same intelligent cause, have suddenly spread and prevailed a wide wasting pestilence.

A slight sketch of the history of the most remarkable pestilences which have prevailed amongst mankind, will manifest to us,

Firstly, That many species of disease have had a distinct unequivocal beginning and origin, which can be referred to a definite time.

Secondly, That others which have been previously sporadic or endemic, have suddenly become epidemic.

Thirdly, That no adequate second cause can be assigned for the production of new diseases, or for the conversion of endemic and sporadic diseases into epidemic (pestilences)—and, therefore, we may conclude, without violating any of the just canons of philosophy, that they are attributable alone to the immediate exercise of the Divine agency.

In deducing this inference it is not intended to exclude or to slacken a most rigorous inquiry into second causes. In many instances we are able to refer new diseases to certain poisons or poisonous influences emanating from the earth, which, when ascertained, we are able to control, to avoid, or to remove their effects ; but in some of these instances, where an immediate cause is known, there have been so obviously great moral results effected by the temporary evil, that we shall not greatly err in referring these to the same superintending Providence which is demonstratively engaged in guiding and controlling human affairs.

It is quite true that in referring the origin of new

diseases and the prevalence of pestilences immediately to the hand of God, we but return to the opinion of the multitude. In the records of every remarkable epidemic disease, we read that the people have ever been ready to recognise the Divine hand, to believe that sin had entailed upon them their sufferings, and to seek, by repentance, humiliation, and prayer, to avert God's just judgments, according to the saying of the prophet—"O Lord, . . . when thy judgments are in the earth, the inhabitants of the world will learn righteousness." And it is little creditable to physicians, either as professors of science, or as men who have a larger stake in humanity than the narrow interests of their profession, to ridicule or condemn this opinion. If, indeed, any one should make it an excuse, either for negligence in studying, or remissness in applying remedies and aiding the sufferers, as is often done by the Asiatic fatalists, he would but prove his entire ignorance of God's dealing with us, both in temporal and spiritual things.

On the other hand, is not the *vox populi* in this instance the deliberate conviction of the most excellent, most learned, and most profoundly scientific men, and the distinctly expressed doctrine of the Church of Christ? To speak only of our English branch of it, her prayers and offices against plagues, pestilences, and sicknesses, distinctly recognise the principle. Why, then, should we dissever our scientific inquiries from the acknowledged general truth which

lies at their very foundation? Why should we not rather take with us every means which can avail us for elucidating nature, in every part? That science or philosophy is but spurious, and “falsely so called,” that would reject a key-truth to unlock many mysteries, because the source whence it is derived is not pleasing to man’s vanity and self-sufficiency.

This reference, however, of the origin of diseases to the immediate agency of God, as it has been the thought of the many and of the pious in all ages, has been objected to by physicians, for its supposed tendency to obstruct inquiry into second causes and the nature of diseases, and to preclude all hope of remedies. The objection is as old as Hippocrates,—who, as a heathen, may have some show of reason therein,—and it may become a Mahomedan; but for a Christian to take up such an opinion, would imply that he had not considered the first principles of God’s moral government, which has made us dependent upon faith, and that he would question the truth of the trite maxim of practical Christianity, that we ought to exert ourselves as if dependent on our own power, and then trust to God as if our own power availed nothing.

In a former chapter it has been shown that it is alike consonant to reason and revelation, to consider a belief in the unseen presence and agency of God, a motive for vigorous exertion, but never an excuse for relaxing the use of our own powers. Besides,

in this case, we meet with another fact, which, as rational Theists, we must not overlook, namely, that for *New diseases*, remedies are already provided in nature, that substances are found endowed with powers evidently to the end of their application to cure or alleviate the evil now first inflicted upon mankind. “Known unto God are all his works, from the beginning of the world;” and a due consideration of those endowments proves them to be the result of foresight and intention; provisions for emergencies destined to arise in process of time.

If we may presume, and enough has already been said to make the presumption neither unreasonable nor unscientific, that the immediate agency of the Divine Governor of the universe may be traced in the production and prevalence of epidemic diseases, this ought not to remain a barren speculation; on the contrary, it must excite us minutely to investigate and scrupulously record every feature and incident which we can discover respecting such diseases, since we may expect to find in every phenomena which they present to us, meanings, warnings, and instructions, of a spiritual, superadded to their physical character.

NOTE ON MESMERISM, OR ANIMAL MAGNETISM.

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This strange delusion seems destined in the present age to supply the place formerly occupied by witchcraft and demonology. There appears, under Providence, a law that in every phase of society, and under every form of civilization, whatever excellencies mankind attain, a strong contrast shall accompany them, to vindicate the perpetual influence of moral evil, and render palpable the subjection of man to sin and error. Passing by the degrading mythology of the imaginative and skilful Greeks, the barbarous ignorance of the military Romans, and all ancient examples, and looking only at our own immediate ancestors, we find that their highest excellencies, their firm simple stedfast faith, their hearty spirit of self-devotion to justify their creeds, their vigorous grasp of the great principles they professed, were opposed and contrasted by the credulity and cruel practices flowing out of a belief in witchcraft and demonology.

The glory of the present age is physical science. We daily rejoice in some new acquisition of power over the elements, the subjection of nature to man's use and benefit: this originates no little popular conceit, and the epithet *enlightened* is applied to this age by every popular writer. Combination, too, is the fashion; innumerable societies are formed to diffuse useful knowledge, to educate, to civilize the world! Yet in the midst of all this, springs up an absurdity, the offspring of fraud, ignorance, and wickedness, of which the darkest age might well be ashamed. The apparent advancement of human nature in knowledge, if more than specious, implies no increase of wisdom; we are exposed to delusions quite as degrading as deceived our forefathers; and, what is very curious, they are either precisely the same in kind or closely resembling them. If Mesmerism makes the profession of being a physical or metaphysical science, it has attempted to combine itself with demonology, a superstition from which men, in their pride, deemed themselves emancipated. The

scenes to which this has given origin can scarcely be believed. Only a few months since a crowded audience, consisting of physicians, clergy, nobles, men of science and literature, and others, assembled to listen to conversations carried on by a female, said to be asleep, with a person who pretended to put her to sleep on the instant for the purpose of the exhibition—the means being a waving of the hand for a few seconds. The spectators watch a variety of gesticulations, attitudes, and movements, and are told that these are against the patient's own will, but in obedience to the unexpressed will of another! She pretends to see with her hand while her eyes are bandaged; to see into the bodies of the sick, and to be able to indicate their diseases, and to foretell life and death! These things she alleges are accomplished by the aid of a familiar spirit, a demon attending upon her. All this is gravely witnessed by this audience, not as a clever piece of jugglery, but as a new and wondrous science! And the conversations carried on under these pretensions, what are they? Why, the grossest nonsense intermingled with indecent ribaldry, profane oaths and expressions bordering on blasphemy. My pages cannot, to justify these assertions, be sullied by a repetition of these impieties. Let the reader, who wishes for assurances that this statement is not overcharged, refer to the *Lancet*, No. 187, Vol. ii. 1837-8.

These scenes were frequently repeated, and stand there recorded with the names of the individuals composing these assemblies, to astonish men hereafter. They are calculated to excite in us, who are contemporaries, grave reflections altogether irrespective of the question, how many of the persons present were misled by what they witnessed? That men, holding in society at this moment such positions, should assemble to be spectators of attempts like these, implies a degree and species of credulity absolutely alarming. And when Mesmerists allege that they are able by a few ridiculous gestures to render persons insensible, so that their limbs may be amputated without pain, the patient being put into a deep sleep, yet conversing the while upon indifferent topics,—the danger would appear to be small that any man in his senses should believe them. Yet we find an excellent clergyman saying, in a published discourse, he cannot disbelieve these people; but he rather inclines to the theory that these per-

formances are the work of SATAN, openly acting upon the bodies of men!!!

Such things as these indicate an unsoundness in modern knowledge, a weakness in our principles, which is far more deplorable than all the follies and frauds of the Mesmerists accumulated.

But the reader may ask, has not Mesmerism been carefully examined, proved to be fallacious, and defeated? and is it not, therefore, extinct? An answer in the affirmative to the first question, by no means implies an affirmative to the second. Error is not so easily extinguished. On the contrary, the more cogent the arguments adduced against it, the more flagrant the exposure of the fraud, the more tenaciously do some persons adhere to it, and the more zealously attempt its propagation. New pretensions are daily put forth by its partisans, and it seems to possess the tenacity of vitality, attributed by the poet to the wretch *Maleger*, who, although pierced through and through, cloven in twain, and crushed into a mummy, ever and anon revived to combat and do mischief. In a medical journal, published August 20, 1842, a correspondent, who is not ashamed to affix his name, has the effrontery to say, “Mesmerism has safely and steadily proceeded to take its place in the ranks of science, and nothing can ever turn it back.” And we shall have occasion to refer to even more recent exhibitions of its performances.

The author of this work feels it to be incumbent upon him, as a Christian Physician, to guard his readers against this demeaning delusion, and to supply for this purpose some facts in its history, which its advocates would wish forgotten, to deduce such lessons of caution as its prevalence ought to teach us. The designation, Animal Magnetism, applied to this subject by its inventors, is now, in a great measure, laid aside, and that of Mesmerism adopted; this renders the character and practices of its founder Mesmer, an important point of the inquiry, which might else be altogether disregarded. He was a weak, avaricious, unprincipled man; bred to medicine, he published a work in 1766, “upon the influence of the stars on the human body.” He then studied the effect of magnets on the body, and gradually, it appears, was led to adopt a theory, that “a universal fluid exists, as a vehicle of a mutual influence between the celestial bodies, the earth, and

the bodies of animated beings.” So far, and for some alleged properties of this fluid, he borrowed the hypothesis of Descartes, which every schoolboy at that time knew. He further alleged that this fluid could be accumulated, concentrated, transferred from body to body, taking so much, from the more recently published theories of electricity. He proceeds further to assert that this fluid at one and the same time makes known to the physician the state of health of every individual, and is capable of curing all diseases. The Academy of Sciences of Berlin examined these pretensions in embryo, and rejected his principles, pronouncing them “destitute of foundation, and unworthy of the smallest attention.” Mesmer next announced that he was divinely empowered to regulate the operations of the universal magnetic fluid, and laid it down as a maxim that “there is one health, one disease, one remedy, and one physician, and that physician am I.” It would appear to every rational being that *here* was an inmate for a lunatic asylum, rather than the founder of a sect! He published many cases, of cures performed by magnetism, which were proved to be false, and his attempts at imposition were so palpably exposed, that he left his native country, Germany. In 1778, Mesmer reached Paris, where brilliant success and crowds of believers awaited him, and money, the avowed object of his desires, flowed in upon him abundantly. He there professed to cure all diseases by his fluid, animal magnetism; and patients flocked around him to become the subjects of his novel practices. These consisted in bringing to bear upon them every circumstance which could excite the imagination, and agitate the nervous system. Men and women arranged around a vessel, from which iron rods projected, whence they were taught to believe the subtle fluid emanated, were subjected to mutual manipulations, mingling of limbs, gestures, glances, and acts of which decency forbids the description. Music and perfumes lent their aid, and the result soon was to throw the weaker and susceptible female patients into sobs, convulsions, and uncontrollable excitement. These were the desired *crises*. When these were aroused, and had proceeded to the verge of safety, in walked Mesmer, dressed in a violet-coloured satin robe, and carrying a wand to allay the storm of lascivious passion and nervous agitation; and those who did not at once recover were laid in

an apartment where the floor and walls were stuffed and padded, and allowed to come out of their crises at leisure. The greater number of the patients, especially of the females, being no otherwise ill than fancy and susceptible nerves made them, were ready to avouch that they were cured of any diseases which might be required.

Public attention was so generally aroused, that a solemn inquiry was instituted into the matter by commissioners appointed by the king, amongst whom we find the names of Lavoisier, Benjamin Franklin, and Guillotin. A committee of the Royal Society of Medicine, which also gave it the fullest investigation, included De Fourcroy, Geoffroy, and Vicq D'Azyr. The report of the former evinces that the most unprejudiced, calm, patient, philosophical investigation was made into every point connected with it. Some small consideration will be thought by many due to the authority of the reporters upon a question of physical science, but if any reader should not know enough of Lavoisier or Franklin to trust them, he should procure their report, which is a model for any similar occasion. It decides that animal magnetism has *no* existence, that the effects said to flow therefrom are attributable to the imagination, to the rubbings and handlings of the patients, and to imitation. The report of the other committee shows, that although Mesmer's pretences were gross delusions, they had not the merit of novelty, as M. Thouret had demonstrated them to be borrowed from more ancient impostors. Mesmer retired from Paris with his wealth, and we are favoured by his disciples with some records of his life and opinions. To the end of his career he persisted in his claims of having made the greatest discovery the world had ever witnessed. He thought he had been able to magnetise the sun! and he held that the tying of the umbilical cord at birth was the cause of small-pox, and almost all diseases!

Such was the man, who has admirers and followers amongst the learned and noble in England in the year of grace 1842!

The storm of the Revolution put to flight for a time these childish follies of the Parisians, but the lesson was not lost; certain provincial Frenchmen subsequently announced the discovery of Somnambulism, Clairvoyance, Prevision, and other wonderful effects of this *non-existing* fluid; but to escape from the difficul-

ties arising from a physical theory, and yet to derive the palpable advantages from the practices pursued, new hypotheses were devised to account for the effects produced, or said to be produced, which should obviate the necessity of a recourse to common sense. The new *facts* were just suited to the German genius, and, not to be outdone by France, they were eagerly adopted and improved upon by the addition of a small seasoning of demonology. The whole has been imported into this country, and our philosophers have the exalted merit of discovering Mesmerophrenology, (happy association!) and adding it to the advancing science! Let us exhibit some of the *facts* announced by the Mesmerists, and then we may be able to understand their theories and estimate their value; and let us first examine the latest triumphs of this science.

Dr. Elliotson thus writes, in a letter, dated Conduit-street, September 1, 1842:—"I have had for some months under my care, for dreadful fits, two charming youthful patients, carefully brought up . . . beautifully illustrating the power of good training upon a well-developed brain. They both exhibit exquisite Mesmeric phenomena. Are thrown into a profound coma, and which soon becomes sleep-waking. Their limbs may then be stiffened at pleasure, and endowed with enormous force, which, although not yielding to mechanical violence, gives way to contact, or the breath, or to movements of the operator's hand, without contact . . . The eyes may be opened, or the body drawn by movements of the fingers and hands, held at a short distance . . . Without any previous intention, I one day tried to Mesmerize some of the cerebral organs in the young lady. On placing the point of a finger on the right organ of attachment she strongly squeezed my fingers of the other hand, placed on her right hand, and fancied I was her favourite sister; on removing it to the organ of self-esteem, she let go my fingers which were in her right hand, repelled my hand, mistook me for a person she disliked, and talked in the haughtiest manner. On replacing the point of my finger on attachments, she squeezed my fingers of the other hand again, and spoke affectionately. I removed the point of my finger to destructiveness, and she let go my fingers again, repelled my hand, mistook me for some one she disliked, and fell into a passion. The finger upon benevolence

silenced her instantly, and made her amiable though not attached. I thus could alter her mood and her conception of my person at pleasure, and play upon her head as upon a piano I soon found that the same results ensued by merely pointing my fingers near the organs But a fact still more wonderful is this. The state of the organ of one side gives evidence of itself on only half the system. For instance, if I place my fingers on the right hand, and Mesmerize attachment in the *right* side, she squeezes them and mistakes me for a dear friend; if I then Mesmerize self-esteem on the *left* side, she still speaks to me kindly, and squeezes my fingers with her right, as much as ever. But if I place my fingers on her left hand, she repels them, and speaks scornfully to me These are the most astonishing and beautiful experiments that all physiology affords. O that Gall could have lived to see this day—these astounding proofs of the truth of phrenology!”

Dr. Elliotson does not attribute these mighty effects to the operations of his will, he argues against those who suppose *this* to be the power and agency in the Mesmerie phenomena. For let it be observed, the *will* of the Mesmerizer is the convenient hypothesis adopted generally in this country in the place of the magnetic fluid. But this writer says, “I have never excited them by the mere will, I have excited them with my fingers just as well when thinking of other matters, and momentarily forgetting what I was about.”

These passages are quoted from a letter appended to a published lecture by a Dr. Engledue, entitled, “Cerebral Physiology and Materialism, with the Result of the Application of Animal Magnetism to the Cerebral Organs.” In the midst of the inane and inflated nonsense of this lecture, the writer says, “We contend that mind has but an imaginary existence—that we have to consider matter only.” And he proposes to substitute the term ‘Cerebration,’ for thinking or mental operations. This discourse Dr. Elliotson characterizes as “truly philosophical, benevolent, and noble;” and upon the question of materialism he adds his testimony: “No fact,” he says, page 37, “is more evident than that in certain conditions matter thinks.” “All animals will and think and have a consciousness of personality,—the whale and animaleules. . . . If a spirit is required for thinking and willing,

every one of these microscopic creatures must have a spirit or a soul. Away with such nonsense."

Are these 'exquisite' results, to use a favourite expression of Dr. E., enough to convince my readers? If not, let us look further into the *facts* of Mesmerism.

An amiable simpleton at Busancy, the Marquis de Puysegur, charitably practised Mesmerism, and fed the sick and poor of his neighbourhood. His manipulations and devices to bring the action of the imaginary fluid upon his patients and induce crises, gave rise to somnambulism, or sleep-waking, a state in which the patient, although asleep, talks and walks and performs various wonders, differing much in different individuals. This, it must be admitted, was a happy discovery; henceforth crises, such as Mesmer looked for no longer occurred, but the magnetic somnambulism was cultivated, and brought forth abundant fruits. The mere production of that state of partial sleep which has been long known as somnambulism by any arrangements, at pleasure, would be a curious fact, and one which might be credited; and if true, employed in certain states of disease with some hope of advantage. But the utter falsehood of the pretension of somnambulism, is demonstrated by the claims of the patients in that state to supernatural powers, which ought at once to have opened the eyes of the operators if they had had a grain of common sense. They, however, were ready to believe all, and even to suggest new wonders for their patients to affect; thus combining the two characters of dupe and impostor. In France, the somnambulists pretended to have the faculty of *clairvoyance*, that is, to be able to see with parts of the body remote from the eyes. Many cases are published where patients could, it is said, read letters placed at the back of the head, or upon their chests; some could see out of the tips of the fingers, others could exercise various senses in parts remote from their appropriate organs, whilst the usual channels of sensible communications were closed. Thus some professed to taste sweatmeats placed upon the pit of the stomach, and to hear whispers in other parts of the body, whilst the ear was insensible.

Another faculty of the somnambulist is *prevision*, the power of foretelling events; and, moreover, by some unknown and unnamed sense of perceiving what is distant; thus one person who

had never seen Rome was able to describe all its localities, with such accuracy as to prove it to be a present object; they were also able to see into the bodies of the sick, and point out the exact seat, nature, and extent of diseases. These are the professions of the French somnambulists; in Germany, as we have said, demonology is mixed up with it: there the sleep-walker converses with spirits good and bad, souls of departed men, and some even pretend to hold personal intercourse with the Deity. One female, whose case has been minutely detailed, and her revelations recorded, was called the Prophetess of Prevorst, on whom various effects of Mesmerism were said to be produced by the contact of mineral substances, metals, earths, &c., and from this the practices most prominent in this country have been derived. We may observe, by the way, that the alleged phenomena of Mesmerism have never been treated with unbecoming neglect or contempt; learned bodies have repeatedly appointed committees to examine them, and thus the prejudices of individuals have been guarded against. Clairvoyance has been so frequently professed, and it would seem to afford so good a test of the science—a crucial instance—that it has been thoroughly investigated, a large reward has been offered to any one who could exhibit such a case, but not one has stood the test of examination. *It has been fairly and experimentally refuted!* The persecution of Galileo is in one sense the luckiest event in history. Every blockhead whose nonsense is exposed, every knave whose false pretences are denounced, finds consolation and takes refuge in a reference to the Great Persecuted, and the soft-hearted public is invariably touched and demands forbearance. Hence errors refuted a hundred times may always be reproduced without compunction, under the assurance of sympathy and the certainty that the refutations are forgotten. Thus it is with Mesmerism; it flourishes still, notwithstanding repeated exposures of its errors and falsehood.

In University College Hospital, the continental somnambulists have been rivalled, if not outdone. There the young women performed and attracted the crowds alluded to above,—there Dr. Elliotson learned and taught the science and art. His female instructress is carried round the wards, to the bed sides of the patients, whilst she herself is in Mesmeric sleep, to discover for her physician! the diseases under which they suffered, and to indi-

cate the result to be expected, recovery or death, as she was instructed by her attendant spirit! Dr. Elliotson most industriously studied the effects of minerals upon this young lady, and the various attitudes and gestures produced by gold, silver, nickel, lead, &c., and of Mesmerized water. It was, we happen to know, contemplated to have these graceful attitudes delineated, engraved, and published! Those who have dipped into the unprofitable lore of the Rosicrucians and alchemists, will remember how sensitive the demons of their creed were to the influence of certain metals. Whither these practices were tending we may guess only; for, fortunately, Mr. Wakley was at this juncture induced to try these experiments, and by the rigorous exertion of common sense he proved that the whole was imposition, and that the pretended effects were always produced when the patient *supposed* the proper metals were employed. (See *Lancet*, No. 783.) This has proved a decided check to the propagation of Mesmerism in this country, which at that time threatened to be universal; but it has not, as we have seen, extinguished it. A few months has been time enough to allow Mr. Wakley's clever exposure to be forgotten, and it is now daily reviving and spreading.

Amongst other pretences, there is one which we must not forget, namely, the insensibility to pain the Mesmerizers say they can produce by their arts. Every now and then we are favoured with histories of surgical operations performed whilst the patient is insensible. This seems to have puzzled the Rev. Mr. M'Neile. It is one of the many curious coincidences between this new science and witchcraft. The witch finders relied so much upon this sign, the insensibility to pain shown by the possessed, that they were always provided with a dexterous person called the *pricker*, who, whilst the attention of the wretched old woman suspected was drawn to the fearful accusation, came stealthily behind and passed his needle into her body, and if he could accomplish this without giving pain, it was held to be a demonstration of guilt, the result of infernal protection. It would be probably needless to refer to several instances which have occurred of females submitting to operations without flinching or exhibiting any sensibility, for the purpose of deceiving these very men, who have afterwards confessed they suffered the usual pain. Dr. Elliotson's 'interesting,' 'excellent,' 'exquisite' 'little girl,'

O'Key, wishing to have the monopoly of the intense interest shown by the assembled gentlemen, exposed these pretences in other patients, who, however, deceived the doctor until so detected. Let the reader refer to any work on acupuncture, and he will learn in what manner needles may be passed into most parts of the body without pain.

But it is not needed that we should *account for* the facts alleged by Mesmerists; whilst they are disputing among themselves concerning the theory of their science, the agency by which these wonders are wrought; whether it be “an universal fluid,” the assertion of Mesmer, adopted by most of his followers in France; the influence exerted by the will of one person over the bodily organs of another, as some of our philosophers say; or the “workings of a spiritual nature in a certain independence of those bodily organs to which it is normally closely tied and bound,” which is Mr. Herbert Mayo's theory;—they may fairly be left to settle without the interference of disbelievers. Instead of accounting for, we may boldly deny most of their facts. The profession of Mesmerism places a man beyond the pale of belief. No assertion he can make is worthy of the smallest credence. He is either himself an impostor, or so easily deceivable by appearances, that his testimony is of no value whatever. He would be deluded by every vulgar jugglery,—deceived by any jocose or malicious attempts upon his credulity, however simple. He is usually, too, of easy credulity in all matters. Most of our English Mesmerizers are Homœopathists or Hydropathists. Their medical statements, therefore, are not to be relied on even for such facts as might from honest hands be accepted. When indeed a man announces that he is a Mesmerist he ceases to be a physician, and he who admits such a person into his family to administer to his children, or entrusts so solemn a charge as his own or a relative's health to his keeping, is guilty of a crime against society, against truth and honesty, and we call upon him to determine, with his conscience enlightened by christian truth, whether he be not chargeable with moral turpitude.

The *nature* and *kind* of the professed practices and results of Mesmerism ought to repel every sensible man and every modest female from witnessing them. Every one present, except with the express design of publishing their refutation, sanctions and fosters the deceit. When the Baron Dupotet imported it last

into England, the persons composing his audiences, probably drawn only by curiosity, were the promoters of its subsequent success and present prevalence. They exhibited to the world how gross and monstrous pretensions might successfully be advanced to fill the pockets of unscrupulous adventurers. They offered a public premium for guile. The well-known influence of nervous sympathy upon susceptible females should keep them away from exhibitions of affected convulsions and somnambulism. But this is not all; when exalted personages in the church were seen witnessing Dupotet's experiments, they proclaimed to the world that the pretences of the Mesmerists were not inconsistent with *their* knowledge, *their* philosophy,—that in their estimation such things *might* be! This we maintain to be most pernicious and inexcusable. We have ourselves never witnessed any Mesmeric performance, although often importuned to do so; for this reason, that no single circumstance was ever adduced as a fact of the pretended science worthy of attention, (which was not utterly inconsistent with absolute certainties in physical science,) nothing which could not most easily be feigned by the young women exhibiting. This is the character of the fits, the sleep-waking, the tossing of limbs into attitudes, and the rest; they have not even the interest of clever legerdemain; they are vulgar and easily imitable performances—not to be compared with many professed feats of jugglery. But if we must see them, are we therefore to believe what we see, when the exhibitor has reason to mislead our judgment? The scenes of pretended sorcery witnessed by Mr. Lane in Egypt, infinitely surpass in dexterity the whole mass of Mesmerisms on record. In these and similar cases men are satisfied *not* to believe what they see, inasmuch as they judge their sense to be purposely deluded.

The believers in demonology had a far more rational ground for their opinion than the Mesmerists. For if we are once convinced of the manifestation of spiritual agencies operating upon men's bodies visibly, we have an adequate cause for every marvellous event. So far the Germans have been more rational than their neighbours. This question, however, is we hope disposed of in the text. The subject of this note may caution us against claiming for the present age any exemption from errors equally degrading, to save us from which, and every similar delusion, we must have ever recourse to our "most holy faith!"

CHAPTER VIII.

A BRIEF HISTORY OF PESTILENCES AND THE ORIGIN OF DISEASES.

“There shall be pestilences in divers places.”—MATTHEW xxiv. 7.

SECT. 1. Pestilences before our Lord's Advent.

2. Plague of Athens.

3. History of the true Plague.

Its origin in the Sixth Century.

Great Plague of the Fourteenth Century.

Plagues of London in the Seventeenth Century.

Present prevalence of Plague in the Levant.

4. History of Small-pox and Measles.

5. A Disease which arose in the Fifteenth Century.

6. The Sweating Sickness.

7. The Sea Scurvy.

8. The History of Asiatic Cholera.

9. On the Origin of several Minor Diseases, Malignant
Sore Throat, Scarlet Fever, Hooping Cough.

10. General Inferences from the preceding Histories, and
Conclusion.

CHAPTER VIII.

“The particular drift of every act proceeding externally from God, we are not able to discern, and therefore cannot always give the proper and certain reason of his works Howbeit, undoubtedly a proper and certain reason there is of every finite work of God that little thereof we darkly apprehend we admire, the rest with religious ignorance we humbly and meekly adore.”—HOOKER.

THE history of mankind, to make any approach to completeness, or to afford us a sound basis for philosophic inferences, must be made to embrace a minute investigation of all the causes which have concurred in varying the seat of civilization, and in producing those fluctuations in the numbers of particular cases, which tended to their political preponderance and subsequent decadence and disappearance. Very few of the many races, making up the aggregate of one species, can boast of any high antiquity. Some indeed there are, which, from their locality, have remained unmixed for ages, but the only one which has been distributed amongst all mankind, and yet retained its separate existence

from the earliest times to the present day, is admitted by all the world to have been the subject of miraculous conservation. That the Jews have not, up to the present moment, been absorbed and lost in the general commixture of the various races amid which they have lived, admits no other solution worthy of being deemed rational; and an argument derived thence for the doctrine of an interposing providence is irresistible. In like manner we may observe that the recorded increase and decrease of the numbers of certain races, the rise, progress, predominance, and subsequent total loss of people, present phenomena, which, like the present existence and state of the Jews, can only be referred to a directing and controlling mind. It may be, that it is commonly by the interposition of second causes acting according to definite laws, even when we are not able to trace either the law or the intermediate agent by which the divine control is exercised. But we find in the nature, origin, and operation of these causes, facts so entirely isolated, so utterly unlike the institution and progress of the rest of the physical universe, and so closely analogous to mental acts which our daily experience makes familiar to us, that the inference is pressed upon us of the existence of a *Mind*, watching human affairs, originating “new things,” working out results which imply that the materials of which our earth is composed, together with agents of whose existence we have no cognizance except through their effects, are subject to its

power, and are employed in its purposes ;—a mind whose acts and purposes are so far like the acts and purposes of every other mind as to be successive, that is, they obey the law of time, and are developed in their results gradually.

But amid many causes employed by Providence for regulating the number of mankind in general, or for repressing or obliterating certain races, or depopulating countries, none are more remarkable than those which it is our present purpose to trace in a brief history ; namely, PESTILENCES ; i. e. diseases which have at any time prevailed extensively over one or many countries, and have carried off the population more rapidly than the common course of human mortality. Many interesting facts relative to the origin, prevalence, mode of communication, features and nature of pestilential diseases, will come before us to prove and illustrate the assumption with which we have set out, namely, that no theory of them can stand which shall exclude the immediate agency of God.

The purposes obviously subserved by pestilences in the Divine economy, have not been confined to their influence upon the amount of population in the world at large, or of particular places. They have unquestionably operated also as punishments, inasmuch as they have frequently been inflicted upon communities where crime had begun to surpass the ordinary bounds of human depravity, and men have seemed to be converted into fiends. Armies, the

instruments of the ambition of men who have rivalled the powers of hell itself in mischief, have often been checked in their career of violence and bloodshed by the destroying angel of God's anger in pestilences. Thus manifesting the vigilance of the intelligent Governor of the world, and proving that although He is long-suffering and abundant in mercy, the divine justice slumbereth not. Already in the preceding chapter, and by adoption of the motto of this, allusion is made to other and more recondite purposes of pestilences, which it is our duty in all humility to trace, and in connexion with the history of each we shall endeavour to make out the physical and moral results, which, in accordance with christian doctrine, we must regard as indicating the *intentions* of Providence.

Before the advent of our Lord we read but of few pestilences. Those recorded in the Holy Scriptures were generally local, and are assigned to the immediate and miraculous agency of God—either for the punishment or the protection of his people. In the historical remains of antiquity pestilences are spoken of, but by no means with that frequency and universal prevalence which later ages have witnessed. The Roman historian Livy indeed refers not seldom to pestilences occurring in the city itself, in the armies of Rome or those of her enemies, as performing an important part in the transactions worthy of being recorded. But these were endemic diseases, depending upon locality, and not properly pesti-

lences,—a distinction which will be made apparent in the sequel. The prophecy of our Lord that there should be in the period subsequent to his personal ministry on earth “pestilences in divers places,” implies that they had been less frequent antecedently; and distinguishes by this sign these from former ages; and we have abundant proofs of the truth and fulfilment of this prophecy. More than once the whole human race has seemed in danger of being utterly destroyed, and often the peril has been apparently great of a deep and enduring injury, which would have rendered utter extermination a catastrophe to be desired. But our Almighty Maker and Governor has ever in wrath remembered mercy, and when the danger has been most imminent, when destruction has seemed inevitable, “the plague has been stayed,” and in the manner of its cessation, as well as in its birth and prevalence, has manifested itself to be but the minister of the Divine purposes.

SECT. I.—PESTILENCES BEFORE THE CHRISTIAN ERA.

The term *pestilence*, as has been already observed, is the popular designation for every widely-diffused disease prevailing at any time; the technical appellation *epidemic* is precisely the same, except perhaps, as this latter term is applied to innumerable instances which do not attract popular notice, it may be thought to have a wider application.

The word *endemic* is applied to any disease pre-

vailing in a district, but limited to a definite locality ; such diseases universally depending upon a poison emanating from the soil under peculiar circumstances, or generated by many chemical conditions incident to a crowded population and want of cleanliness. *Sporadic*, applied to diseases, implies single cases, here and there.

The inhabitants of ancient Greece were familiar with many forms of endemic fever, which at the recurrence of favouring seasons, or upon certain events which palpably tended to aggravate their violence, such as the crowding together of multitudes in confined spaces, as in cities or camps during war, became *epidemic* ; that is, they spread more widely and more fatally than at other times, and were regarded as pestilences. The character and symptoms of these are accurately depicted in one of the most valuable of the works of Hippocrates, and they then presented precisely the same features as characterise the diseases witnessed at the present day in similar circumstances ; that is, in undrained or marshy countries, in situations where the sea or other body of water alternately occupies and abandons tracts of land ; upon coasts where the rivers bring down animal and vegetable matter to putrefy, and wherever crowds of persons congregating together render it impossible to maintain due ventilation and cleanliness. There are certain well-known localities where the poison which produces fever always exists in sufficient strength to affect visitors, although every-

where it is aggravated at certain seasons. In the extensive marshy country about Rome, this poison, called by the Italians *mal-aria*, appears always in some places energetic enough to affect new comers ; but at certain seasons the range of the poison includes part of the city : and in ancient times, when the population was vastly greater than at present, and when multitudes continually flocked to the metropolis of the world, it is no wonder that the extensive mortality thus occasioned gave rise to descriptions and expressions which have been supposed to indicate the existence of similar diseases to those which have prevailed in later times as universal pestilences.

The epidemic fevers of Hippocrates—the pestilences of Livy and other ancient historians—the fever of the deadly African coast, Sierra Leone—the yellow fever of the West Indies and America—the Bulam fever, and many other terms according to locality, have been given at various times to *endemic* fevers, which have been characterised by being intermittent or remittent ; that is, the course of the symptoms exhibit a constant tendency to intermit their severity, and thus to present the appearance of a succession of paroxysms. This remittent or intermittent character strikingly characterises the whole group of endemic diseases, and very recently it has been rendered probable that they may be referred to a poisonous agent, the chemical nature of which is well known, and the

source of which can readily and indisputably be traced. It has been proved by chemists, that when the decomposition of animal and vegetable substances — (that is, decay or putrefaction) — takes place in contact with water containing sulphates, (a class of salts abundant in salt water, existing in many soils, and the cause of the brackish taste in water,) that an aërial compound, known as sulphuretted hydrogen, is generated, and infects the air around. This gas is highly deleterious to animal life; but although it is very probable, it is not yet proved to be the exact cause of remittent and intermittent fever; it may be that it is itself a vehicle for some more active substance, dissolving and diffusing it through the atmosphere of the places where malaria exists. A development of sulphuretted hydrogen unquestionably takes place under the circumstances above detailed, as the remote causes of epidemic fever. It is further certain, that in any place not properly drained, in new countries where the soil is rich in alluvium, or covered with a rank vegetation, and in general where pools of stagnant water alternate with spots where plants flourish, such fevers are endemic; and other diseases, also characterised by intermission, or consisting of recurring paroxysms, abound.

It is important that these facts should be borne in mind while entering upon the inquiry into the cause of those diseases which have been regarded as pestilences. It belongs to a subsequent part of this work

to treat more particularly of endemic fevers; but we may remark here, that recent writers of eminence have even separated typhus from the list, alleging that we may not rightly regard this as the result of any poisonous agency produced by decomposition of animal and vegetable substances, but that it is a specifically different disease. Into its history, however, we cannot now enter, our first concern being with the recognised pestilences of the ancients, which appear to bear but a faint resemblance to those with which modern history and our personal experience have made us acquainted.

SECT. II.—THE PESTILENCE OF ATHENS.

The only pestilence of antiquity which claims our especial attention is that of which we have a graphic account by the great classical historian Thucydides, in his history of the Peloponesian war. He was not only an eye-witness of the events he has related, but he suffered an attack of the disease in his own person, and narrowly escaped with his life. This pestilence claims our notice, not only on account of the celebrity it has attained, but from the minuteness with which its character has been drawn by the historian, thus enabling us to compare it with subsequent diseases, to which it bears little more resemblance than in name, and affording us an illus-

tration of certain general inferences, which we shall find to be deducible from a comprehensive view of pestilential diseases.

In the beginning of the summer of the second year of the Peloponesian war, when the Lacedemonian army had been but a few days in Attica, the plague broke out in Athens. "This year, by confession of all men, was of all others from other diseases most free and healthful. If any man were sick before, his disease turned to this; if not, yet suddenly, without any apparent cause preceding, and being in perfect health, they were first taken with an extreme ache in the heads, redness and inflammation of the eyes; and then inwardly their throats and tongues grew presently bloody, and their breath poison and unsavoury. Upon this followed a sneezing and hoarseness, and not long after the pain, together with a mighty cough, came down into the breast; and when once it was settled in the (pit of the) stomach, (*καρδια*,) it caused vomit, and with great torments came up all manner of bilious purgation that physicians ever named. Most of them also had the Hickeyexe, which brought with it a strong convulsion, and in some ceased quickly, but in others was long before it gave over. Their bodies outwardly to the touch, were neither very hot nor pale, but reddish, livid, and beflowered with little pimples and wheelks; but so burned inwardly as not to endure the lightest clothes or linen garment to be upon them, nor anything but mere

nakedness, but rather most willingly to have cast themselves into the cold water. And many of them that were not looked to, possessed with insatiate thirst, ran unto the wells, and to drink much or little was indifferent, being still from ease and power to sleep as far as ever. As long as the disease was at the height their bodies wasted not, but resisted the torment beyond all expectation, insomuch as the most of them either died of their inward burning in nine or seven days, whilst they had yet strength, or if they escaped that, then the disease falling down into their bellies and causing there great exulcerations and immediate looseness, they died many of them afterwards through weakness. For the disease began above and came down, and he that overcame the worst of it was yet marked with the loss of the extremities. There were even some that lost their eyes, and many that presently, upon their recovery, were taken with such an oblivion of all things whatever, as they neither knew themselves nor their acquaintance. For this was a kind of sickness which far surmounted all expression of words, and both exceeded human nature in the cruelty wherewith it handled each one, and especially by this. All birds and beasts that usually feed on human flesh, though many lay abroad unburied, either came not at them, or tasting, perished." Dogs, which attempted to feed on the bodies, perished. Great dejection of mind seized the sufferers, as they were often abandoned by

friends and servants. The best men, those whose feelings prompted them to minister to the sick, suffered most. But “this disease never took any the second time so as to be mortal. Those that recovered, therefore, attended the sick fearlessly, and supposed they should never die of any after disease.” “Besides the present affliction, the reception of the country people and their substance into the city, oppressed both citizens and themselves. For living in booths, the mortality was now without all form; dying men lay tumbling one upon another in the streets, and men half dead about every conduit, through desire of water. The temples also, where they dwelt in tents, were all full of the dead that died within them; for oppressed with the violence of the calamity, and not knowing what to do, men grew careless both of holy and profane things alike.” The laws touching funerals were broken. The piles collected by one party, were seized on and fired by another—a general licentiousness prevailed—all morality and honesty banished. “Neither the power of the gods, nor laws of men, awed any man. Not the former, because they concluded it was alike to worship or not worship, seeing they all alike perished; nor the latter, because none expected to live to receive judgment; but they thought there was a far heavier judgment decreed against them, and before they fell they thought to enjoy some little part of their lives. While this disease thus prevailed in

the city, the enemy laid waste the fields and villages without." Pericles died at this time of this disease.

It is evident from the above description of Thucydides, that this epidemic of Athens was a disease *sui generis*, presenting literally no resemblance to the diseases hereafter to be described; and, although commonly bearing the name of plague, it was widely different to the disease prevalent at the present day in Egypt, Syria, and Turkey, to which the term plague is now properly appropriated. It seems more to have resembled malignant scarlet fever with sore throat. Of the latter, however, we have no accounts until the seventeenth century.

SECT. III.—HISTORY OF THE TRUE PLAGUE.

The word *plague* has, in popular language, generally been employed synonymously with *pestilence* and *epidemic*; often, indeed, it has been used to designate any severe disease; and, even figuratively, other prominent evils; in these senses it is found in the English translation of the Scriptures; the corresponding Hebrew and Greek terms having the same latitude of direct meaning, and the same figurative application. It is only in modern times that the word plague has been properly restricted to one specific disease. This disease constantly existing sporadically in the countries of the Levant, and

often passing into an epidemic, spreads more or less extensively around its local habitation, and becomes perfectly well known to physicians, and even non-professional persons. It is, therefore, now no longer possible to mistake its character, or to confound it with other diseases; but its remote cause—the mode of its propagation—the question, whether it be an endemic fever, whether it observes any periodic law in its prevalence and subsidence, and many other points respecting it, are all vehemently debated.

The plague is characterised by the association of glandular swellings inflamed and suppurating, under the arm-pits, and in the groins, with all the symptoms of severe typhus fever. Dark spots, arising from small blood-vessels breaking up and bleeding beneath the skin, and called popularly plague-spots or tokens, together with large boils and carbuncles, are some of the features added to the oppressed mental faculties and prostrated animal powers of the well-known low nervous or typhus fever, which occurs in this country. Not that plague is no more than fever, with those superadded symptoms, for if so, we should sometimes witness the latter, when prevailing in its worst form, passing into plague, which never happens. I say this advisedly, because all the alleged instances of such conversions have not been sufficient to make the matter even doubtful. In every epidemic disease we are able to learn its essential character only by comparing many cases, carefully observing the pe-

cularities imparted by individual idiosyncrasies, and separating them from the invariable phenomena. Thus, in plague, the symptoms which appear to assimilate it to fever, from their close analogy, are not absolutely essential to its existence. In the severest form of plague, the spots or tokens frequently, and the buboes or glandular abscesses sometimes, although more rarely, are the only symptoms, and when they thus occur, are immediately followed by death, i. e. before the febrile symptoms have time to be developed. To these features of the disease we must add—from conscientious conviction—its highly contagious character, a strong tendency at all times to pass from the individual affected to all who approach him, although certainly, like all other contagious diseases, this tendency is in the direct ratio of the nearness of approach—as if the poison which generates the disease is diluted as it recedes from its origin. By some, however, it has been thought that absolute contact with diseased persons is essential to communicate plague, which, if true, would prove that the poison is not diffused through the atmosphere, nor dissolved in it, but a liquid or solid substance; of this hereafter. In the course of this work we shall have occasion frequently to advert to a prevailing error in medical science, namely, false generalisation, assumption of identity, when between two things there are points of resemblance only. Thus, as plague is accompanied by symptoms very similar to fever, those who have motives

for representing it as non-contagious, and would wish to conceal its dangerous character, dwell much upon these points of resemblance, and would thence have us infer their identity. But if the evidence be carefully considered, there can be no doubt in the minds of the unprejudiced, that plague is a disease of a specific character, that it is not mere fever in a severe form. Again, although it is, as we have said, always existing in a certain locality, it cannot be assimilated with endemic diseases, whose remote cause is known; nothing is better established than the broad distinction of the two.

Plague, as it has often given its name to other dissimilar diseases, so it has itself been the most prominent, and has recurred the most frequently of all pestilences; for this reason it claims the foremost place in this history, and for the further reason, that it is still accomplishing purposes, the intention of which in the Divine economy, (that is, results whence we may readily deduce intention,) we may in a great measure trace.

The first inquiry respecting plague which presents itself to us in relation to our present purpose, is, If it be a disease, *sui generis*, has its existence been coeval with that of the human race, and if not, when did it first make its appearance amongst mankind? The previous and more general question, whether any new diseases *ever* appear, we have taken the liberty to assume in the affirmative, for the moment, because, in the sequel, and as various

diseases come to be considered, we hope this interesting fact will be satisfactorily proved. So palpable is its truth upon an enlarged view of history, that the learned historian of medicine, Dr. Freind, treats with contempt those who deny that new diseases from time to time appear—and says, “it is to no purpose to dispute with those who have such a wrong turn in their heads.”

The ancients described what they saw of diseases so minutely, and their descriptions agree so accurately with such as have come down to our own time, or which now occur in the human body, that we cannot reasonably think they could have failed to see and describe the pestilential diseases which we deem *new*, had they then existed. Proceeding upon this principle, the first description we have upon record of the existence of the *Plague* is in the extraordinary pestilence of the sixth century, described by cotemporary writers, Procopius, Evagrius, and Gregory of Tours.

The description of Procopius especially, is so minute, and agrees so exactly with the character of that disease which has received the attention of some of the greatest ornaments of our profession in the Levant, and been by them repeatedly described, that no doubt can be entertained of their identity. The pestilential diseases of an earlier period were either endemic fevers, which we have seen constituted the periodical seasons of mortality at Rome, and in Greece, or diseases of a distinct character

from plague. Thus we have records of one which prevailed very extensively throughout the Roman empire, from A. D. 250 to 265, and which was described by St. Cyprian, upon its appearance at Carthage. So extensive and fatal was this pestilence, that it produced an obvious diminution of the numbers of mankind. It appears to have been the result of a deficiency of food, arising from the devastating wars which raged for several years throughout the whole Roman empire, and prevented the pursuits of agriculture. And with this cause agrees its character, for unhappily there have been but too many opportunities for us to study the physiological effects of famine, “dejection of mind, exhaustion of strength, incessant involuntary evacuations, violent heat in the bowels, swelling of the abdomen, inflammation in the mouth, the eyes of the sufferers preternaturally bright and sparkling, the extremities of the body perished.” This clear and striking description is so obviously different to the plague at the present day, and to the particulars related of the pestilence of the age of Justinian, by Procopius and others, that no one who will candidly compare the history of the two diseases, can fail to perceive that they are specifically distinct. On the other hand, the epidemic of the reign of Justinian agrees exactly with modern plague; and the interesting truth, that this was the first appearance of the disease amongst mankind, must be regarded as in the highest degree probable.

According to the historian of the Decline and Fall of the Roman Empire, that epidemic lasted, with more or less severity, for fifty-two years, i. e. from A. D. 542 to 594, and at a moderate calculation it destroyed one hundred millions of the human race. He asserts that it depopulated some of the finest parts of the earth, which have never to this day recovered their inhabitants.

Procopius was an eye-witness of the disease, as it prevailed in Constantinople in the year 543. He relates, “that this disease, which almost destroyed the human race, and for which no cause could be assigned but the will of God, did not rage in one part of the world only, nor in one season of the year. It ravaged the whole world, seizing all descriptions of people, without regard to different constitutions, habits, or ages, and without regard to their places of residence, their modes of subsistence, or their different pursuits. Some were seized in winter, some in summer, others in other seasons of the year.

It appeared first in Pelusium in Egypt, and thence spread westward to Alexandria, and all parts of Egypt; eastward towards Palestine; and extended to all parts of the world, laying waste islands, caves, mountains, and all places where men dwelt. If it passed by a particular country at first, or *slightly affected it*, it soon returned upon it with the same desolating rage which other places had experienced. It began in maritime towns, and

spread to the interior country. It seized Constantinople in the spring of 543.

“Most persons were seized suddenly, without any premonition ; nor was there any change of colour or sense of heat ; for until evening the fever was so slight, that the patient was not ill, nor did the physician, from the pulse, apprehend danger. But in some cases the same day ; in others the next ; in others at a later period ; a bubo arose in the groin, the arm-pits, or near the ear, or in some other part. All patients alike had these symptoms. Some were seized with drowsiness and slumbering, others with furious distraction. The slumberers forgot all things ; some would eat if desired, others were neglected and starved.

“Neither physician nor attendant caught the distemper by contact of the sick or dead ; and many, encouraged by their wonderful escape, applied themselves with assiduity to the cure of the sick and the burial of the deceased. Many were seized, they knew not from what cause, and suddenly died. Some who were given over by the physicians, unexpectedly recovered ; others, who appeared to be in no danger, speedily expired. Many died for want of relief, others recovered without assistance. No cause of this disease could be devised by human reason, no means of prevention or cure. To some bathing was beneficial, to others injurious. Many leaped into the water and the sea. In many the

bubo, without sleep or delirium, turned into a gangrene, and these died with excruciating torture.

The physicians opened the bodies of some, and found within the sores huge carbuncles. Those whose bodies were spotted with black pimples of the size of a lentil, lived not a day. Those who had running sores escaped, and these were the most certain signs of recovery. Some had their thighs withered, others lost the use of their tongues.

“To women with child the disease was certain death. This disease, in Constantinople, lasted four months, raging three months with extreme mortality. In the beginning few died more than usual, but the disease gradually increased till it swept off 10,000 persons in a day.

“Many, out of fear, left their bad courses of life, and consecrated themselves to God; but when the danger was over, not a few of these fell again into their old habits of wickedness and despising of God.”

. The first attack of the disease was not unfrequently attended with a remarkable mental hallucination; the sufferers fancied they saw phantoms or demons, by whom they were struck, or imagined themselves smitten by invisible hands.

Evagrius wrote in 594, when the disease was on the decline, and shortly before it disappeared. He was himself a sufferer, both in his own person and family. He adds some particulars to the excellent account of Procopius. “Some cities,” says he,

“ were so severely assailed by the disease, that they were left without an inhabitant! In several parts of Italy the harvest and the vintage perished on the ground. Some districts were more slightly affected.

“ The pestilence did not always begin its attacks at the same season of the year, nor cease to rage in all places in the same manner. In some places it broke out in the midst of winter; in others in the spring; in some it began in summer; in others in autumn; and in some cities it attacked certain parts of the town, and left others untouched.

“ Very often we might observe particular families all perished, in a city where the disease did not prevail as an epidemic.

“ The inhabitants of infected places removing their residences to cities not infected, often fell victims alone to the plague. At the commencement of this calamity I was seized with the *inguinal* plague, and have lost many of my children, my wife, and great numbers of my kindred, servants, and labourers.”

The description given by Evagrius of the symptoms and results of the disease, corresponds with that of Procopius: “ Glandular swellings, accompanied by fever of a typhoid character; carbuncles, vomiting of blood, black spots in various parts of the skin, from the blood-vessels breaking, and blood being extravasated; delirium or lethargy, indicating the extent to which the brain is implicated.” He continues,

“ The modes of contracting the disease were various, and all calculation was baffled. Some perished by once entering infected houses ; some by only touching the sick ; some contracted the disease in the market. Some, who fled from infected places, escaped themselves while they communicated the disease to others. Many, who remained with the sick, handled them, and the dead bodies of those who died of the disease, wholly escaped. Others, who had lost their children and dependants, and in despair sought death by throwing themselves in the way of infection, and attending the sick, found all their efforts vain,—they could not contract the disease.” Those who had escaped from one attack of this disease, did not enjoy any immunity from a second ; many, indeed, died from the second attack.

It is related of this plague, when prevailing at Rome, that “ men died suddenly, at play, at table, and in conversation. Sometimes they fell dead in the act of sneezing ; so that when one heard another sneeze he turned to him, and exclaimed, ‘ God help you ! ’ ” which was the origin of a custom still observed in some countries. It is recorded that a procession was made there by the reigning Pope, and eighty persons dropped down and died during its progress.

After the subsidence of this pestilence, which took place at the close of the sixth century, the world appears to have enjoyed an immunity from the visitations of the plague for a consi-

derable period. We have no recorded accounts of its prevalence extensively until the fourteenth century. But during this interval other no less remarkable diseases arose and prevailed as pestilences, with nearly equal violence and fatality. It is, however, probable that the plague did not cease to exist, as historians have noticed the prevalence of many epidemics, having certainly a less extensive range, some of which may have been plague, although others were mere epidemic fevers of a different and far milder kind. In the eleventh century a plague is said to have spread over the world, which had its rise in Italy. In the thirteenth century we find the armies of the Crusaders ravaged by pestilences, and historians have recorded some slight notices of a mortality which is said to have fallen almost exclusively upon the Jews.

THE GREAT PLAGUE OF THE FOURTEENTH CENTURY.

One of the most remarkable visitations of pestilence in the history of mankind, occurred in the fourteenth century ; the influence of which upon the subsequent state and progress of society has never been justly delineated in modern times. It appears to be a subject well worthy of a more extended investigation than it is possible for me here to give it ; a slight sketch is all I can pretend to attempt. The historians of that period have universally recorded, and there is no just reason for doubting their veracity, that unusual atmospheric phenomena, and great

turbulence of the surface of the earth, occurred at the beginning and middle of the fourteenth century. Mountains fell down, earthquakes overthrew towns, and changed the relative distribution of land and water in many countries. Meteors of unwonted magnitude, and in great numbers, filled the air, and a variety of telluric and astral phenomena marked this as an epoch in the earth's history.

When, therefore, the plague spread and ravaged all countries, it was natural that it should be attributed to these circumstances, that they should be regarded as its causes. But a careful comparison of this plague with the disease described by Procopius will convince us that, although the human race underwent a trial coincident with the changes in the inorganized matter of the globe, the instrument was one which had previously manifested its presence—that the fatal and wide-wasting pestilence was not caused by any poison let loose in those convulsions of the elements, and contaminating the atmosphere, but an agent already existing performed the fatal work of devastating the earth.

This pestilence, it is universally agreed, began in the east, and the popular opinion of the time made “Cathay”* the place of its origin. Wherever it first appeared as an epidemic, it certainly was in the year 1345; and before the termination of the year 1346, it had spread with extraordinary rapidity, and manifested a degree of virulence never

* China.

equalled by any pestilence, over Asia and Africa. Spreading eastward and westward, it reached Italy in 1357, England and Germany in 1348-9.

As it passed from country to country, and city to city, it found eye-witnesses qualified to observe and to record for posterity its character and history. This was the day-spring of modern letters; and amongst the many historians whose pen it employed, was the reigning emperor of Constantinople, John Cantacuzenus: he witnessed its dreadful ravages amongst his subjects; it fell upon his capital with unparalleled severity, nearly depopulating it; his own son fell a victim, and, deploring his loss, he wrote a lucid and minute history of the visitation;—and his description is worthy of a professed physician. The celebrated Boccacio, in Florence, saw and described the plague, in his introduction to the *Decameron*. Archbishop Parker, in England, and many others, have left on record a very full relation of its phenomena and effects. Their several accounts have been combined, and the features and progress of the plague somewhat minutely traced by the historian of the “Life and Times of Edward the Third,” Joshua Barnes. From his account we learn that it was indeed the plague, and precisely the same disease as that described by Procopius, and now known under that title in the countries of the Levant.

Its fatal extent and malignity at this time, like the epidemic prevalence of all other diseases, is perfectly

inexplicable upon any physical theory. The symptoms of the disease described by contemporary writers, although by no means clearly or accurately defined, are sufficiently so to enable us to recognise it. They tell us of its frequent commencement with delirium, of the buboes in the arm-pits and groins, of the blains, blisters, pimples, wheals, and spots upon the skin, in connexion with intense fever,—of the association of these with bleeding from the natural passages, vomiting, and spitting of blood; and that the fatal course of the disease was run in variable times, from a few hours to two or three days at most. In all these symptoms we recognise, without any possibility of mistake, true Plague.

There can be no reasonable doubt entertained that this epidemic had a progressive course, that it did not break out simultaneously over the world, nor at remote places, but that it began somewhere in the east of Asia or Africa. It had prevailed three years upon the great continents before it reached England, and no circumstances could be discovered to favour the arrival or spread of such a malady. “Immediately after the feast of our Lord’s Nativity,” says Archbishop Parker, “in winter, and amidst the greatest abundance of provisions, when there could be no suspicion that a contagious disease would arise among men, the plague commenced.” It prevailed alike in summer and winter, spring and autumn, and during its continuance, which extended to a period

of eight years, it destroyed at least two-thirds of the human race. It was not equally fatal to all countries, but in none was it more severe and general than our own. Joshua Barnes reckons it to have destroyed nine-tenths of the whole population of England. This is generally considered to be somewhat overstated; but we have no means of forming more than an approximate judgment from certain incidental circumstances accompanying the disease, and the loose estimates made at the time of the extent of the mortality in large towns. Thus, it was found impossible to inter the victims of this disease in the usual burial-grounds in London, and new sites were generously given to the public for the purpose, in one of which no less than 50,000 persons were in one year interred. The law courts were closed, and no parliaments met for two years. The price of provisions, which, as we have seen, were abundant at the commencement of the pestilence, became extremely low during its prevalence; a cow could be bought for one shilling, a heifer for sixpence, a fat sheep for fourpence, an ordinary sheep or a lamb for two-pence, and so on in this proportion. The ordinary value of money may be reckoned at ten times what it is at present. The cattle and sheep wandered wild over the country, and subsequently died in immense numbers. The land remained untilled, and the consequence was a scarcity amounting to a famine, after the subsidence of the pestilence. The whole of Europe was equally affected with these calamities.

Dr. Hecker, who has written an account of this pestilence under the name of the Black Death, tells us that no less than 200,000 towns and villages were left utterly without inhabitants. At Avignon, where the Pope then resided, the mortality was little short of universal. Many religious communities were entirely exterminated, and the Pope received intelligence from all parts of Asia and Africa that the mortality was no less there than in his own immediate neighbourhood; that it, in fact, reached to all parts of the known world. There has not since occurred so universal a pestilence. The subsequent history of the plague is as a succession of local epidemics, of which the most remarkable are the plague of London, 1665; of Marseilles, 1720; of Messina, 1743; and its frequent prevalence as an epidemic in Turkey and Egypt.

After the subsidence of the great plague in the reign of Edward III., the next invasion of this country of any note was in 1592, at which time the Bills of Mortality were instituted, to ascertain with accuracy its extent. These records were discontinued in 1595, at which time the plague ceased, but again resumed in the year 1603, when it re-appeared. It has been thought that some regularity in its prevalence and disappearance may be traced, and the following table, compiled from the Bills of Mortality, shows the periods of its greatest and least extent in the metropolis, until its final disappearance.

In 1603 36,269 persons died of plague in London.

1617	6	-	-
1625	35,417	-	-
1629	0	-	-
1630	1,317	-	-
1633	0	-	-
1636	10,400	-	-
1657	4	-	-
1664	6	-	-
1665	68,596	-	-
1666	1,998	-	-

After 1666, cases of plague occurred in London in inconsiderable numbers, until 1679, after which year no more plague has been recorded in the Bills of Mortality.

The leading features of the last extensive and fatal plague of London are so well known, through the celebrated narrative of De Foe, "A Journal of the Plague Year,"* that they need not be repeated here. Lord Clarendon remarked, that the mortality was believed by many persons to be far greater than the Bills admitted. This appears plainly enough upon their face, if we attend to the two numbers of those recorded to have died of plague, and those representing the total burials. Thus,

			Plague.		Burials.
In the year	1624-5	the numbers are	35,417	-	54,265
	1629-30	-	1,317	-	10,554
	1635-6	-	10,400	-	23,359
	1664-5	-	68,596	-	97,306
	1666	-	1,998	-	12,738

* See Mr. Brayley's Edit. of De Foe's Work in the Family Library.

Thus, in this last year, whilst the recorded decrease in the number of deaths from plague was 66,598, the decrease in the total number of burials was 84,568. In ordinary years, the number of burials at that time ranged from 10,000 to 14,000. This, therefore, renders it manifest, that the reputed mortality of plague at that time is greatly underrated.

Questions most interesting and important are involved in these facts. Why did the plague then disappear from this country?—Why have we ever since that time enjoyed an immunity from this fearful disease? Many answers have been returned, which, if satisfactory to their authors, are very inadequate to the explanation of these curious truths.

London, it is well known, was destroyed by fire in 1666, and a vague notion prevails that the fire had some connexion with the disappearance of the plague. But this will not bear the slightest examination. The fire did not reach to those parts of the town where the disease first appeared, and where it fell with most violence, namely, St. Giles's; and the disease, as we have seen, did not finally disappear until thirteen years after that time. It cannot be attributed to any improvements in cleanliness of the people. It has been well and incontrovertibly said, by a writer in the *Encyclopædia Britannica*, that “any seeds of disease which depend for their development upon filth, will not perish for want of a hot-bed in many districts of the metropolis, and other large towns in this country.” It was not, as others

have supposed, the adoption of sea-coal as fuel, that had come into general use a long time previous to the great plague. In 1615 no less than 200 vessels were engaged in the port of London. To no improvements in building, ventilation, or draining, or in the morals or habits of the people ; nor can the quarantine laws, with any reason, be supposed to be equal to so great an effect. Of the prudence and propriety of these laws we entertain no doubt ; but we must presume to differ in toto from an author who says, “ We must thank our own care and prudence that we are still able to keep it at a distance.” If our philosophy be not altogether at fault, it is not by human strength or skill that this is accomplished, but the effect must be attributed directly to the ever-acting providence of God.

It is in the Turkish empire that plague has found a perpetual habitation and retreat from the time of its origin to the present day, whilst it has only made occasional excursions into Europe. In 1720, it was brought to Marseilles, and committed the most frightful havoc upon the inhabitants of that city and neighbourhood. In 1743, it prevailed at Messina, in Italy, and in both places gave rise to certain effects to be commented on in the sequel.

When the plague is studied at the present day without regard to its past history, it offers some remarkable features worthy of notice for our present purpose, and further, because these mislead many into the formation of hasty and most erroneous

opinions respecting its nature and laws. Plague sprinkled here and there in sporadic cases, appears to resemble a severe form of typhus fever, as it is defined to be by Dr. Cullen. Season after season it spreads partially, and in certain localities imitating an endemic fever, prevailing most in spring and autumn ; and many physicians who have witnessed it at such times and in this form only, have become anti-contagionists, and have assimilated plague with the intermittent or remittent fevers of Italy and the African coast. Mehemet Ali was supposed by many to have banished it altogether from his capital, Grand Cairo, if not from Egypt, by his sanatory regulations, cleansing, ventilating, and draining. For ten years prior to 1835, a few cases only occurred, scattered here and there over Egypt, but in that year 80,000 of the inhabitants of Cairo perished, and 200,000 in the entire country. In 1836-7, 100,000 died of plague in Constantinople.

When it is thus epidemic, it is no way affected by the seasons, but prevails equally in the extremities of heat and cold, wet and dry. No law, indeed, of its extension can be stated which does not admit of innumerable exceptions. Drs. Alexander and Patrick Russell, brothers, the former in his *Natural History of Aleppo*, the latter in his *Treatise of the Plague*, which they both studied by personal observation, consider the disease to be highly contagious, and were inclined to believe that it observed some law of periodic advance and decline. In their admirable

volumes, the disease must be studied for a complete history. At Aleppo, in 1742-3-4, and again in 1760-1-2, the disease prevailed as an unusual pestilence. Every part of the Ottoman empire has been, and is, subject to its ravages, and it is most remarkable that Mecca has been its limits eastward until very lately, when there is reason to fear it has appeared in the north-west of Hindostan.

There can be no doubt entertained by any one who examines the case with candour, that the plague has powerfully co-operated with other causes to keep down the population of that empire, to check the progress of the Mahomedan religion, to bring into its present feeble and tottering condition that race of warriors which mainly conduced to its spread and support, and threatened at one time to overwhelm all Christendom.

Possessing some of the most beautiful and fertile countries upon the earth's surface, their empire presents every diversity of clime and unbounded variety and luxuriance of produce, yet the people are rapidly diminishing in numbers, and would ere now have fallen under the dominion of Christian nations and their false religion been consigned to oblivion, save in the page of history, but for the support they have found from more powerful nations from motives of national policy. Plague has thus been a visible instrument employed by God in his providence to limit and to depress the religion of the false prophet, and we look for a further manifestation of that pro-

vidence in its entire suppression. As Christians, we are bound to pray, that, so far as is consistent with the Divine will, the impending destruction of that superstition may be by conversion rather than in judgment !

SECT. IV.—SMALL-POX AND MEASLES.

History and tradition alike testify that the small-pox and measles first appeared among mankind about the time of the rise of Mahomedanism. Some accounts make it to have been actually the same year that gave birth to the false prophet. The Mahometan writers, in order to have it believed that it was of christian origin, allege, that it first appeared in the army sent from Ethiopia to subdue the city of Mecca and destroy the temple of the Caaba—called the War of the Elephant. The christian army was defeated before the walls of Mecca, and many were the prodigies feigned to give support to the inference that the powers of heaven declared against them. Whether it were imported into Arabia from the East or from Abyssinia, or whether it were indigenous to the former country, the evidence of its origin about this time is perfectly conclusive. The accurate description furnished us by the Greek and Roman physicians of such diseases as they witnessed, their total silence upon so remarkable a one as small-pox, the absence of any

clear description of the common effects of the disease upon the countenance, in the Greek and Roman poets and satirists are convincing proofs that the disease was not known to them. The Jewish scriptures, too, are equally silent upon the subject, which yet describe other diseases with the minute discrimination of nosologists. On the other hand, the first author who has described the disease, is a physician of Alexandria, contemporary with Mahomed, named Ahron. His works are not extant, but his account of small-pox is quoted by Rhases, the Arabian, who lived at the end of the ninth and beginning of the tenth century, as the first which had been written. The characters of the disease are so well defined and so palpable, it could scarcely have been missed; and accordingly we find that all succeeding Arabian writers give a tolerably accurate description of its very marked features. So universally did small-pox and measles spread through the Mahomedan empire, that the theories of Arabian physicians were founded upon the belief, that these diseases were natural changes incident to the humours of all human beings. Several of the Caliphs were strongly marked with small-pox, and two of them had a white spot on each eye from it, a common occurrence in severe cases. It is true that attempts have been made from time to time to refer these diseases to a higher antiquity, and because it cannot be reasonably supposed that the Greek and Roman world have overlooked them, a refuge is

sought for them in the East, China, or India, and certain passages of alleged ancient books are quoted as conveying something like a description of them. But the whole case is suspicious, the passages themselves are vague, indefinite, and would serve for many other skin-diseases; the antiquity of the documents doubtful; the possibility of interpolation great; and the propensity of the literary Chinese and Brahmins to claim for their countries a knowledge of everything coming from Europe and professedly new, is so well known, that it would not surprise us to find they laid claim to the steam-engine, as they do to the printing press, gunpowder, fire-arms, and almost every modern discovery or invention. It is too common a fraud to be allowed to stand against the positive testimony of respectable authors. When in later ages the disease was imported into India from Europe, by the Dutch, by way of the Cape of Good Hope, the natives were as much astonished as alarmed at its ravages. These feelings were especially shown in the island of Ceylon, the literature of whose inhabitants is certainly of as high an antiquity as that of continental India, from which it is not pretended to derive any history of these diseases. We should therefore infer from these facts, that they were unknown in those countries until imported there by the Dutch.

Thus, we are at no loss to ascertain generally the character and time of the propagation of small-pox and measles. The victorious arms of the Saracens

spread them everywhere throughout Egypt, Syria, Palestine, and Persia, then successively along the Asiatic coast, and maritime parts of Africa, until at length the invasion of Spain by the Moors in 710, introduced them into Europe, and they at once became prominent objects of attention to the physicians (such as they were) of that age. From that time to the present, these diseases, but especially the small-pox, have borne a most important relation to the condition of the human race. Until the revival of learning in the fourteenth century, we have but incidental notices of it in the literary remains of this darker period of history. The rude chronicles of these times often tell us of some prominent individual bearing the marks of having suffered from small-pox, or that it was instrumental to their death—just such notices as might be expected to be frequent in the classic historians, had the disease existed in that age. In 1492, Columbus first saw the new world, and in 1527, small-pox and measles were imported into the beautiful island of St. Domingo, then believed to have a population of one million souls; multitudes were massacred, many sank beneath the burthen of labour in the mines, imposed upon them by their avaricious conquerors; but these diseases completed the work of destruction—the whole population was annihilated. In 1518, the Spanish commander, Cortes, sailed upon his expedition of conquest from the island of Cuba to the kingdom of Mexico; at his departure the small-

pox had not reached the island ; subsequently, the governor having taken offence at the proceedings of Cortes, despatched an armament to seize his person and bring him a prisoner to Cuba. In one of the vessels composing this expedition, a negro slave, covered with the pustules of the small-pox, was conveyed to Mexico and landed with the troops. The natives caught the infection—it spread with unexampled activity and violence, and at a moderate computation, three millions and a half of that remarkable people perished. In the Carraccas, whither it was conveyed by the Spaniards, many warlike tribes of Indians were totally extinguished. Upon the settlements of North America, particularly New England, the new-comers perished in large numbers from the influence of the climate, but they imported the small-pox, which fell with such severity upon the aboriginal inhabitants, that whole tribes disappeared, and the piety of the ‘Pilgrim Fathers’ referred the evacuation of the country to Providence, who thus, by enabling them to settle without molestation, was supposed to declare the Divine intention that they should occupy it. Up to the present moment, as is well known, the population of the United States goes on rapidly increasing from causes within and without. Swarms from every part of the old world joining the vigorous growth of the new, continually press onward into the interior, dispossessing countless tribes of Indians, and taking possession of their lands. A merciless war is waged against them,

and crimes are perpetrated on both sides which peaceful men can scarcely persuade themselves to believe. But as pioneer to the tide of civilization, small-pox still marches on and cuts down the rude occupants of the forests and prairies. Their doom seems inevitably fixed, and it is better that they should thus perish than sink into slavery to their conquerors. Better they should fall into the hands of God than into the hands of man. A most interesting chapter of human history has of late been written which will perpetuate the memory of this Indian race, and teach the great moral lesson their story suggests to posterity. I allude to Mr. Catlin's work upon the North American Indians, which, amongst other matters of deep import, tells us of the fearful destruction which the small-pox has caused, and is still causing amongst that devoted people. It is supposed that altogether it has proved fatal to at least seven millions of Indians. A single tribe, the Pawnee, have lately been reduced from 25,000 to 10,000. Another tribe, the Mardan, was found by Mr. Catlin himself to consist of 2,000 persons. This tribe appears to have surpassed all Indians, in character for courage, probity, and handsome appearance. He was received by them with affectionate kindness, installed into their most honoured posts, and assisted in his researches. He had scarcely left them when the traders unintentionally communicated to them the *small-pox*, and caused the death of the whole tribe! Not one

individual survived ! The analogy between the effect of this dreadful pestilence in sweeping off the inhabitants of the new world and the office performed, by the sword of the Israelites upon the inhabitants of Canaan, at the command of God, cannot fail to strike the reader. While we are accustomed to think that the deep moral pollution, the utterly degraded state of the Canaanitish nations, furnishes us with a glimpse of an explanation of the Divine judgments upon them, we must acknowledge ourselves incapable of forming any just opinion upon so vast and utter a destruction as that we are contemplating ; but we must recur to our faith in the Divine goodness, and thence be assured that even so signal a display of severity, had mercy and loving-kindness to mankind for its basis.

We, perhaps, may in all humility suggest, that the degrading vices of savage life, the deep pollution of their nature, might have required generations to have eradicated it. In the mean time, where savages are brought into contact with a civilized people, both are grievously demoralised ; the latter suffer deeply in their principles, commit crimes most heinous, and perpetuate to their posterity, prejudices and evil tendencies innumerable and enduring. On the other hand, dreadful indeed as it is to contemplate the entire destruction of a race, we must remember it is to each individual but an anticipation for a brief period of the common and inevitable lot of all mankind, conqueror and conquered, lord and slave.

“ Death hath passed upon all men for that all have sinned.”

A similar destruction in kind, although but limited in extent, has been sometimes witnessed in Europe from this disease. In the year 1707, it invaded Iceland, and destroyed at least one-fourth of the inhabitants. In 1733, Greenland was nearly depopulated by it, and it has continued up to our own times, and until a remedy was discovered, one of the most fatal diseases which afflict mankind. The history of that remedy belongs to another part of this treatise, but the importance of so great a blessing will not be felt unless the previous prevalence and fatality of the disease is kept in mind, and Christians are in danger of forgetting the great deliverance vouchsafed to them in the provision of that remedy by the Father of Mercies, unless reminded of it; and their duty, as they pray against plague, pestilence, and famine, to recollect how graciously that prayer has been answered.

Unfortunately the practice of registering deaths in this country is but of recent institution, and therefore we have no precise records of the fatality of this disease, except in the metropolis, where bills of mortality have been kept since the year 1603. Small-pox is almost always one of the largest items in the bills, and some approximation toward the numbers destroyed by it in the whole country, may be obtained from them by calculation. The generation just past could relate to us the terror inspired in country towns and villages by its appearance, and

point in many places to pest-houses where the infected were carried.

But this wide-wasting pestilence has been governed by laws limited and restrained in so remarkable a manner, that no part of natural history affords a more striking evidence of the existence and interposition of the presiding Intelligence of the universe; and it is therefore an object worthy of the careful study and devout meditation of the Christian.

The symptoms of small-pox, the manner of its attacks, and order of its progress, are no less curious than its origin and history. Let us take a description of a normal case. A person susceptible of the influence of small-pox is brought within the sphere of its contagion, is exposed to the influence of the poison; exactly *twelve* days after he is suddenly seized with rigors, or chilly shiverings, pain in the back, and pit of the stomach; sickness or vomiting immediately followed by headach and feverish heat; in short, all the symptoms of an attack of ordinary ardent fever, with something of an *expression*, which to an acute observer at once proclaims their true nature. These symptoms continue with more or less severity for forty-eight hours, when the eruption begins to appear about the forehead, face, and arms, in the form of small elevated pimples; these gradually increase and extend over the whole body. On the fourth day, each pimple has become a vesicle, that is, a bladder containing a transparent fluid, with

a depression in its centre: this minute central depression is peculiar to the small-pox vesicles, and enables us often to discriminate cases, which, being mild in their form, are liable to be mistaken for chicken-pox; and the distinction is of great importance, inasmuch as the force of the disease depends upon the individual affected, not upon any difference in the poison. A most severe and fatal disease may be caught from the mildest and slightest case. Around each vesicle an inflamed margin or areola now appears and spreads, and there is usually much swelling of the face. On or about the sixth day, the vesicles lose the central depression, and become round and filled with an opaque fluid pus. About the eighth or ninth day, the pustules on the face break, and scabbing commences, and gradually proceeds over the whole body, the fever subsides, and in ten days more the crusts fall off, leaving the skin of a brownish red colour for some time longer.

This is the course of an attack which is recovered from; but the disease which is so often fatal, is subject to interference, and becomes fatal by some of the following circumstances. The pimples are so numerous and close set, that as they suppurate they run together into one continuous mass, and form black fetid scabs. The fever, instead of abating, increases and becomes more violent, ulceration goes on beneath the scabs, and if the patient recovers, it is this which leaves the unsightly scars, pits, and seams, which are well known as pock-marks. But with this

increased severity of its effects on the skin, the disease assails internal and vital parts. The brain, as is evidenced by delirium, the stomach and bowels by bleeding from the natural passages—the lungs and air-tubes; and symptoms of malignancy and putrescency arise, such as extensive inflammation, gangrene of the extremities, and petechial spots about the body.

The best attention of the medical profession has been at all times given to the treatment adapted to this disease; false views and fatal practices long prevailed, and the extent of its mortality will cease to surprise us when we consider, that almost every human being is actually susceptible of its influence; and that under the most improved modes of treatment which modern science has been enabled to devise, it is computed that of every six persons who receive the small-pox by the way of contagion, one dies; and of the survivors, perhaps one half are left with irremediable injuries, pits, scars, loss of sight, or some chronic and unsightly malady. Before the introduction of vaccination, it has been said that the greater number of adults in the metropolis were marked in the face by this disease. A remarkable law, not, however, peculiar to this disease, exempts those who have once suffered from it, from a second attack. This law, as we have before had occasion to observe, is not absolutely universal. Instances have been observed at all times of persons who have had the disease twice in their lives, but the number of these has been greatly exaggerated by the incorrectness of

observers who have mistaken severe chicken-pox and other diseases for small-pox—still it has been proved that such instances really occur. If they had been more frequent, we might never have been acquainted with another very extraordinary law which is peculiar to this disease, namely, that by anticipating it, and taking means to communicate it artificially, a milder form of the disease is ensured, and an equal immunity is obtained from subsequent attacks as if it were taken naturally. The date and author of this discovery are unknown. It had its origin in the east, probably in the avarice of some bold speculator, who, regardless of human life, was only anxious for the preservation of female beauty, there the object of a nefarious traffic. The practice of engrafting the small-pox silently crept over many countries, Georgia, Circassia, Italy, France, Germany, Sweden, Denmark, and even in Wales and the Highlands of Scotland, without attracting the attention of the medical profession. In 1714, a paper appeared in the *Philosophical Transactions*, being the substance of a communication from a practitioner in Constantinople, upon inoculation, which clearly described the practice and set forth the principle upon which the practice proceeded, namely, the production of a milder, if not a totally harmless disease, which rendered the inoculated secure from the natural small-pox. Most strange to say, this excellent paper excited not the least attention, nor could the profession be roused to notice the subject, even after a second communication

from the east, (Smyrna,) repeating similar facts, was published in 1716, and an English surgeon, in a separate pamphlet, bore testimony to the success of the practice. In 1722, the celebrated Lady Mary Wortley Montague, having been a resident at Constantinople, where she had seen her son inoculated with success, determined to introduce the practice into England. It was with difficulty she could prevail on a surgeon to perform the operation, but by interesting the Princess of Wales in it, leave was obtained to try the experiment upon six condemned criminals, whose lives were offered on condition of their being inoculated. They escaped easily, as five of them took a mild form of the disease—the sixth did not take it; and at length, but after great opposition, the King prevailed on the medical men to adventure the inoculation of the children of the Princess of Wales. Fashion then, as ever, more powerful than truth or reason, succeeded in bringing the practice into use. But as the principle on which its success depended was so entirely new to medicine, and as it was soon found that the artificially communicated disease was equally infectious as the natural, and was moreover not entirely free from danger to life, it was very slowly and warily adopted. During the eight succeeding years, only eight hundred and forty-five persons were inoculated, of whom no less than seventeen died; so that by the year 1740, inoculation seemed to be in danger of being abandoned. Medical men were not peculiar in their prejudices

against the clear and convincing evidence of its utility, for the clergy very conspicuously opposed and condemned inoculation. But the practice was pursued in Scotland and in America, and accounts were published of these more successful trials, for they were attended with a much smaller ratio of mortality, and the practice of inoculation was revived. In the year 1752, 3,538 deaths from the disease were recorded in the metropolis; in 1754, the College of Physicians expressed their approbation of it, and its full effect was shortly brought out. Dr. Gregory, the physician to the Small-Pox Hospital, tells us from the records of that institution, one expressly founded to promote the practice, that the mortality by inoculated small-pox, without any restriction as to age or strength of constitution, does not exceed one in five hundred. Thus, the peculiar and almost universal mildness of the artificially communicated disease, became a firmly established truth, but one of which no satisfactory pathological explanation can be given. It has, however, received a very interesting and unexpected elucidation from some recently discovered truths in chemistry.

It has been said above, that the period which elapses, from the exposure to the poison and the first assault of the disease in natural small-pox, termed the latent period, or term of incubation, is twelve days. Now this time is shortened in the inoculation to seven days, or at most eight, from whence springs this curious result—that when a

person has been exposed to the infection, and has in all human probability taken the disease if we inoculate him, the modified disease anticipates the natural and prevents it going through its own proper course. Perhaps the great point upon which the severity of the inoculated disease depends, is the very small amount of the eruption which is produced on the skin ; the accessory fever is often equally severe, as in the disease from infection, but this is not the dangerous period of the disease.

But the small-pox is equally infectious under all conditions, and the most severe case may arise when the infection is taken from the mildest *artificial* disease ; it therefore happened, that as the practice of inoculation spread, the centres of contagion were more generally and frequently extended ; and as the wealthier people only took the course most conducive to their own escape from its worst effects, the poorer sort and the negligent were oftener exposed to it, and the number of the infected was really much greater than it would have been, had the disease been left to itself. From hence it followed, that the total amount of mortality from small-pox was little, if at all, lessened by inoculation. Calculations were made by two physicians for the House of Commons, of the annual average of the loss of lives by small-pox, in Great Britain and Ireland, during the last thirty years of the eighteenth century, and the respective numbers were thirty-four and thirty-six thousand. But if inoculation did not, numerically

speaking, save many lives, it must be admitted to have accomplished two important purposes,—it enabled the prudent to enjoy an immunity from its injurious and fatal effects, and it paved the way to the discovery of the great remedy, vaccination. Let us reflect for a moment upon the prodigious amount of suffering implied in the estimate of thirty-six thousand annual deaths; for if all these fatal cases had arisen from the natural disease, six times that number must have passed through it; or if all had sprung from inoculation, five hundred times that number must have suffered; but the real number, of course, was somewhere intermediate; and enough is incontestibly proved to proclaim strongly the blessing of vaccination, and to excite our astonishment that its employment should up to the present moment be so irrationally and so fatally neglected. During the years 1837, 1838, and 1839, the small-pox spread as an epidemic through most parts of this country, and destroyed upwards of 30,000 persons: in the single year 1838 the Registers (now a satisfactory source of information) make the number of deaths from small-pox 16,268: a fact which, if it stood perfectly solitary, would afford an abundantly powerful reason for the Act of Parliament recently passed, making the practice of inoculation penal, and holding out encouragements for the promotion of vaccination. Should the legislature hereafter be enabled to enact a penalty for the neglect of vaccination, the time may soon

arrive when the existence of the small-pox here will be a matter of history alone, and its features will be practically known only to travellers into less favoured regions. It will be curious should one thousand years be found to be the limits of its duration, and such an event is at least probable.

The progress of measles, which, as we have seen, arose with small-pox, has often been parallel with the latter. Measles seems to have received the mission (so to speak) to aid in limiting the population of civilised countries, chiefly by cutting off great numbers in childhood. It often prevails as a fatal epidemic. In a subsequent chapter we shall discuss the remarkable fact, that at certain seasons diseases are very fatal, which at other times are easily controlled and cured. This curious character belongs to measles, but no successful investigation has at present been made into the physical cause of this phenomenon.

SECT. V.—THE ———.

IN the latter part of the fifteenth century, and shortly after the discovery of the New World by Columbus, a disease broke out in Italy, which claims our especial attention, as being in a most remarkable manner directly connected with sin. No one can doubt, who takes a view of the history of those times,

that the transgression of the seventh commandment was the prevailing and prominent vice, and it pleased God, by a new and previously unheard-of disease, to mark his displeasure, and to interfere for its correction. The precise moment of its origin, and the exact locality where it appeared, are disputed. By some it is supposed that it may be traced to an individual, at Valencia in Spain; and conjectures have been hazarded that it might have been brought there from America by some of the companions of Columbus. More probable accounts make Italy its birth-place, and the occasion of its spread through Europe, a French army at that time engaged in conducting the siege of Naples. That it was a new disease, previously unknown amongst mankind, and therefore a sensible interposition of the moral Governor of the universe to vindicate his own laws, cannot be successfully disputed.

“ In the earliest appearance of this distemper, as well as since, there were many who, not being used to think or reason any further than the ancients showed them the way, took a great deal of pains to prove that the disease was known both to the *Greeks* and *Arabians*, though but imperfectly described. And here we have instances how the words of old authors may be wrested and perverted to serve the present purpose, and support a favourite opinion; for their method of arguing was to quote by scraps, to pick out one symptom out of one treatise, another

out of a second, and so on, till at last they dressed up such a disease as the ancients had not the least notion of. The same way of reasoning, we may observe, was used by all those who have endeavoured to prove that the description of the small-pox is to be found in *Hippocrates* and *Galen*. Men, merely speculative and not versed in practice, may be allowed to carry their fancies very far in these points, and from a particular point or expression in an old author endeavour to do an honour to antiquity, which it does not want."

We see in the subsequent history of Europe, and in effects clearly traceable to this infliction, the development of providential designs for mankind. To check that great, grievous, and deadly sin,—to vindicate the fundamental moral necessity of the Mosaic Law,—to prepare men's minds (for the mental character is in a peculiar manner debased by this vice) for the great coming change,—it is impossible to conceive a more appropriate or a more effective appliance. The disease rendered men loathsome to themselves and disgusting to others. Branded with marks as apparent and no less abhorrent than that of Cain, they would, wherever it was possible, shrink into obscure retirement, and avoid the society of their fellows. The extent and duration of the ravages of this disease,—a striking type, as it was the evidence and fruit of sin,—indicate the deep moral depravity which overspread the world at that time.

The light of Christianity was well nigh extinguished under a load of meaningless ceremony; its moral influence almost everywhere entirely obliterated by the supremacy given to the promotion of the secular interests of its priests and bishops, the substitution of a church worship for devotion to God, and a trust in doings, the most meritorious of which was profuseness in giving to the church and its ministers, whose esoteric creed was *gain is godliness*. Its chief at that time, he who so boldly and blasphemously avowed that creed, saying, "See what wealth this story of Christ brings us," is said to have himself fallen a victim to this disease. The whole human race seemed in danger of receiving a permanent and irreparable injury, even if it escaped total extinction. But a remedy was provided by a gracious and merciful Providence, to check its extension to the innocent from the guilty, to moderate its violence, and to save mankind from so fearful a consummation of sin and misery. The disease has not, however, entirely ceased; even up to the present moment it exists, and furnishes a powerful motive for checking and lessening the prevalence of the moral evil. The history of this disease and the remedy together, furnish one of the most convincing arguments for the directing providence of God, and the probationary character of man's present state which can be derived from nature. The disease,—directly punitive of sin, destroying the lives of many, and exciting alarm in whole communities where the transgres-

sion for the punishment of which it was instituted abounded. The remedy,—one, already so much in use for other purposes, so readily at hand as to be suggested immediately to physicians by analogy; far more effective against a first infection than subsequently; and as its use is repeated for subsequent offences, apt to become itself dangerous, mixing up its own poisonous effects with the disease.

The disease,—still, even at present prevailing, yet not so prominently and obviously as to affect man's probationary state, to overawe him into obedience to the moral law;—in such case it would interrupt the free exercise of his will; nevertheless, sufficiently prevalent to become an aid in the cause of holiness, and by duly exciting fear, often to protect the young, and to save from contamination the unsuspecting and the innocent. Both disease and remedy,—we must admit to be under the sovereign control of him who “forgiveth all our iniquities, and healeth all our diseases.”

SECT. VI.—THE SWEATING SICKNESS.

THE next remarkable pestilence which claims our attention, was not imported from the east—the usual birth-place of diseases—but sprang up in our own country, immediately under the eyes of men qualified to observe and record its character.

Its existence was only temporary, for having accomplished its mysterious and appointed work, it entirely disappeared. This disease was designated by several terms—*Sudor Anglicus*—the Englishman's sickness—the sweate, or sweating sickness. It had some very curious and interesting features, and found a worthy historian in the justly celebrated physician, Dr. John Caius of Salisbury; this treatise, entitled, a “Boke of counseil against the disease, commonly called the sweate or sweating sickness. Made by Jhon Caius, docteur in physicke; very necessary for every person, and much requisite to be had in hands of al sortes for their better instruction, preparacion, and defence against the soubdain comyng and fearful assaulting of the same disease, 1552,” is a most excellent account of this extraordinary visitation, and affords us a humiliating comparison with the amount of our success, in investigating a more recent pestilence.

“In the yere of our Lord God 1485,” says this boke, the date being probably a misprint for 1483, “shortly after the 7th daye of August, at whiche tyme kynge Henry the Seventh arrived at Milford in Walles out of France, and in the firste yeare of his reigne, ther chanced a disease among the people, lastyng the rest of that monthe and all September, which for the soubdaine sharpeness and unwont cruelness passed the pestilence. For this commonly giveth iij or iiij, often vij, sumtyme ix; at that firste, at Athens, Thycidides describeth, in his

seconde booke, sumtyme xi, often xiiij days respecte to whom it vexeth. But that (i. e. the sweating sickness,) immediately killed some in opening there windows; some in plaieng with children in there strete doores; some in one hour, many in two, it destroyed; and at the longest, to them that merrily dined it gave a sorrowful supper. As it found them, so it took them; some in sleape, some in wake; some in mirth, some in care; some fasting, and some full; some busy and some idle; and in one house sometyme three, sometyme five, sometyme seven, sometyme eight, sometyme all, of the whyche if the twelke in every town escaped it was thought great favor."

Dr. Caius calls this disease a contagious fever of one natural day, all the symptoms of fever in an intense degree were concentrated into twenty-four hours. The whole paroxysm could be most distinctly seen in those who recovered, but it was generally fatal in the early stages. It is described as affecting first some local internal part, with intense heat and burning sensations, accompanied by unquenchable thirst, restlessness, sickness, (but seldom vomiting,) headache, delirium, then faintness and excessive drowsiness; the pulse quick and vehement, and the breath short and labouring. The extent of mortality in this disease was greater than in any other ever known, scarcely any that were attacked escaped; one in a hundred, and even a less proportion is spoken of. Happily it did not

spread very extensively, only attacking here and there a town or village, but what was very remarkable, it seemed to follow such inhabitants of infected towns as went elsewhere, without being communicated to the places where they fled. Many even went to France and Flanders, and there fell victims to the disease. It is also said that it attacked no foreigners in England, and that the Scotch were entirely and everywhere exempt. Hence it was called the English disease. Another most curious point of its history was its sudden invasion and cessation. From its first appearance in 1483, it recurred in London five times, i. e. in 1485, 1506, 1517, 1528, 1551, and extended to some few country towns. It appears that although the numbers attacked were not increased, the virulence of the disease, in those attacked, reached its maximum in 1517, when it was commonly fatal in three hours. At that time, many of the nobility, who had been previously spared, died of it; its first attacks being confined to the poorer sort. At its fourth accession it was not so soon fatal, usually killing in six hours; at this time it extended to Holland and Germany, and interrupted a conference at Marpurgh between Luther and Zuinglius. Its last return was in 1551, at which time it is said to have carried off 150 persons in one day at Westminster. Modern writers, who have merely heard a loose account of these facts, ignorantly pronounce this disease to have been the plague. But the trea-

tise of Dr. Caius, who was an eye-witness of its prevalence at Salisbury, where it destroyed a thousand persons, must be read, ere an opinion can be formed upon this question, and his testimony is decisive. It was a disease *per se*, and we cannot doubt that it neither existed before 1483 nor after 1551; that its career accomplished some great and important end, mysterious although it be. The mission it was intrusted to fulfil is not fully accomplished, however, until the instruction to be derived from it, in connexion with the history of other pestilences, is exhausted.

SECT. VII.—THE SEA SCURVY.

A GREAT epoch in the history of mankind was opened in the sixteenth century, by the discovery of the way to India, around the Cape of Good Hope, and of the great continent of America, literally a new world. These were results of an impulse of the human mind, which arose most mysteriously just before this time, to extend the knowledge of the surface of the earth men had inhabited for so many ages, and made but feeble attempts to know, and which simultaneously led to great improvements in the art of navigation. Those great triumphs, the first fruits of the rich harvest reaped by modern

enterprise, were well calculated to arouse all men's energies, to excite a lively desire to extend and complete these discoveries. These impulses were still more powerfully stimulated by that restless cupidity which men always evince when the faintest hopes dawn, even upon a distant horizon, of sudden and great riches to be obtained by only risking life, a stake always considered small in the comparison. Hence the building of ships, and the planning of expeditions of all sorts began, and was continued even as late as the beginning of the eighteenth century ; at first to share the merit of discovering new lands, to obtain illimitable heaps of gold and silver ; and afterwards,—as the first adventurers in new regions could only gather these desired objects by slow degrees, and as other nations envied the riches so acquired of Spain and Portugal,—to wrest by violence from them, their acquisitions as they were conveyed to Europe. During the earlier part of this period the nations had not devised any system of international laws which should extend to the ocean. Fleets sent out with the sanction of sovereigns and states pursued most lawless courses. Men remarkable for gentleness and even christian profession at home, no sooner embarked and lost sight of their native land, than they became changed into pirates, and robbed without let or compunction. What wonder, then, if the more vulgar and vicious of their followers chose a course of lawless

independence, and became rovers and buccaneers, and that the seas swarmed with these desperadoes ?

During the whole of this period, it pleased God, in his providence, that a disease should be of very frequent occurrence on ship-board, in expeditionary armies, and oftentimes prevail epidemically in sea-port towns or cities, especially when undergoing the rigors of a siege, which by its terrible ravages should check the course of those marine banditti, cripple the energies of their armies, and thus not unfrequently prove a protection to the more peacefully disposed. It is true, it did not confine its destruction to the most guilty, so far as human eye can reach, or our erring judgment conceive—but, like all these scourges, it affected indiscriminately all persons within its reach. When first this *disease* attracted the attention of physicians, by its deadly effects upon the crews of ships at sea, it may not have been, strictly speaking, a *new disease*. Dr. James Lind, whose admirable “Treatise on Scurvy” furnishes most of the facts worthy of record respecting it, considers that it had long existed in the northern parts of Europe, either in sporadic cases, or as endemic to certain situations. He, however, admits that he could find no evidence for this opinion, but that the first recorded account of it he could discover, is in the “History of Louis IX.,” wherein a description of a disease, which appeared in his army in Egypt about the year 1260, exactly

corresponds with it, and that there is no further historical notice of the scurvy until 1497, when it broke out in the crew of Vasco de Gama, who discovered the passage to India and the Cape of Good Hope, when one hundred of his crew, out of one hundred and sixty, died of it.

It was certainly unknown to the Greek, Roman, and Arabian writers on physic, unless a very questionable passage in Pliny, respecting a disease which broke out in the Roman army under the command of Cæsar Germanicus, when encamped near the Rhine, be allowed to refer to this disease. Pliny's description rather appears to indicate that the men were under the influence of mercury, which might have been caused by the use of some water containing a salt of that metal in solution, as it is attributed to the effects of a certain well of sweet water. The absence of the symptoms believed to be distinctive of scurvy, must decide our opinion that it was not this disease, although presenting some similar features.

The universal practice of war, and the frequency of long sieges, amongst the ancients, must, had this disease existed, have caused it to be noticed by historians, as these are their favourite topics of discourse. After its appearance in Vasco de Gama's ship, almost every voyage became more or less perilous by the occurrence of scurvy, and innumerable instances are recorded of its fearful and destructive ravages. It has often proved in wars more fatal

than the sword, and has several times prevailed epidemically over whole countries, especially in the north of Europe. Many expeditions have had their purposes of warfare or profit entirely defeated by it; besieged towns have been compelled to surrender, and it has been the total destruction of powerful fleets. The frequent occurrence of this disease, and its various and variable symptoms, produced a popular apprehension, which prevailed during the seventeenth century, and is now scarcely removed, that it could mix up its effects with all other diseases, and, indeed, is the root and origin of many, especially of those affecting the skin, or attended with any external ulcerations.

“In the twenty years,” says the pious and excellent Admiral Sir Richard Hawkins, in his ‘*Observations*,’ published in 1622, “since I have used the sea, I dare take upon me to give account of 10,000 men consumed with this disease.”

The siege of Breda in 1625 was made memorable by the extraordinary prevalence of this disease among the soldiers, and the occurrence of an incident curiously illustrative of the influence of the mind upon the body. The scurvy broke out about the vernal equinox, and quickly increased. On the 20th of March, 1608, soldiers were affected. As the summer advanced the number somewhat diminished, but the sufferings of those afflicted were dreadful. The soldiers gave themselves up to despair, refused to do their duty, and conspired to

deliver up the city, their comrades so quickly dying around them. “On the 2d of May, when the Prince of Orange heard of their distress, and understood that the city was in danger of being delivered up to the enemy by the soldiers, he wrote letters, addressed to the men, promising them the most speedy relief. These were accompanied with medicines against the scurvy, said to be of great price, but of still greater efficacy. Three small phials of medicine were given to each physician. It was publicly given out that three or four drops were sufficient to impart a healing virtue to a gallon of liquor.

“The wonder-working balsams were now displayed. The commanders were not let into the secret of the cheat put upon the soldiers. All flocked about the physicians in crowds; every one soliciting that some might be reserved for their use. Cheerfulness again appeared on every countenance, and an universal faith in the sovereign virtues of the remedy prevailed. The effect of the delusion was really astonishing, for many quickly and perfectly recovered. Such as had not moved their limbs for a month before were seen walking the streets sound, upright, and in perfect health. They boasted of their cure by the prince’s remedy. Many, who declared that they had been rendered worse by all former remedies which had been administered, recovered perfectly in a few days, to their inexpressible joy, and the no less general surprise.”

This influence of the mind over disease, and the sanatory effects of cheerfulness, hope, and confidence, were exhibited in a most striking manner also in Commodore Anson's voyage, from which the following interesting and instructive quotation is abridged. It is introduced here for the purpose of furnishing the reader with a correct picture of the disease, and it cannot surely be contemplated without an emotion of thankfulness toward the GREAT PHYSICIAN, who had furnished a remedy for this disease, which in his good time was discovered, and which has now rendered us exempt from its deadly visitations. Let who will, remain satisfied to refer the discovery of the remedy to human means alone; I would look beyond, to the endowment of the remedy with power over the disease, and ascribe, as is most due, the glory to God alone!

The expedition of Commodore Anson to the South Seas was undertaken in the year 1741, for the purpose of inflicting as much injury as possible upon the distant possessions of Spain, then at war with this country; but it seems to have been regarded by the commander and all those engaged in it, rather as a means of personal aggrandisement, for the pursuit of which the public service was but a flimsy pretext. The indomitable perseverance with which this purpose was followed, through the unparalleled sufferings they endured from the scurvy, in addition to those always incident to the sea and to war, had

it been in a better cause, would have been worthy of all admiration.

Anson's squadron, as is well known, consisted of five ships, the writer of the following narrative being in the commander's ship, the *Centurion*, of sixty guns. (page 139 to 142.)

“ Soon after our passing Streights Le Maine the scurvy began to make its appearance amongst us, and our long continuance at sea, the fatigue we underwent, and the various disappointments we met with, had occasioned its spreading to such a degree, that at the latter end of April, there remained but few on board who were not in some degree afflicted with it; and in that month no less than forty-three died of it on board the *Centurion*. But though we thought that the distemper had then risen to an extraordinary height, and were willing to hope that as we advanced to the north its malignity would abate; yet we found, on the contrary, that in the month of May we lost nearly double that number. And as we did not get to land till the middle of June, the mortality went on increasing, and the disease extended itself so prodigiously, that after the loss of above two hundred men, we could not at last muster more than six foremast-men in a watch capable of duty.

“ This disease so frequently attending long voyages, and so particularly destructive to us, is surely the most singular and unaccountable of any that affects the human body. Its symptoms are incon-

stant and innumerable, and its progress and effects extremely irregular, for scarcely any two persons have complaints exactly resembling each other; and where there hath been found some conformity in the symptoms, the order of their appearance has been totally different.

“ However, though it frequently puts on the form of many other diseases, and is therefore not to be described by any exclusive and infallible criterions, yet there are some symptoms which are more general than the rest, and, occurring the oftenest, deserve a more particular enumeration.

“ These common appearances are large discoloured spots dispersed over the whole surface of the body, swelled legs, putrid gums, and, above all, an extraordinary lassitude of the whole body, especially after any exercise, however inconsiderable; and this lassitude degenerates into a proneness to swoon, and even die, on the least exertion of strength, or even on the least motion.

“ This disease is likewise attended with a strange dejection of spirits, and with shiverings, tremblings, and a disposition to be seized with the most dreadful terrors on the slightest accident. Indeed it was most remarkable, in all our reiterated experience of this malady, that whatever discouraged our people, or at any time damped their hopes, never failed to add new vigour to the distemper, for it usually killed those who were in the last stages of it, and confined those to their hammocks who were before

capable of some kind of duty, so that it seemed as if alacrity of mind and sanguine thoughts were no contemptible preservatives from its fatal malignity.

“ But it is not easy to complete the long roll of the various concomitants of this disease ; for it often produced putrid fevers, pleurisies, the jaundice, and violent rheumatic pains, and sometimes it occasioned an obstinate costiveness, which was generally attended with a difficulty of breathing ; and this was esteemed the most deadly of all the scorbutic symptoms : at other times the whole body, but more especially the legs, were subject to ulcers of the worst kind, attended with rotten bones and such a luxuriance of fungous flesh as yielded to no remedy. But a most extraordinary circumstance, and what would be scarcely credible upon any single evidence, is that the scars of wounds which had been for many years healed, were forced open again by this virulent distemper. Of this there was a remarkable instance in one of the invalids on board the *Centurion*, who had been wounded above fifty years before, at the battle of the Boyne ; for though he was cured soon after, and had continued well for a great number of years past, yet, on his being attacked by the scurvy, his wounds, in the progress of his disease, broke out afresh, and appeared as if they had never been healed. Nay, what is still more astonishing, the callus of a broken bone, which had been completely formed for a long time, was found to be hereby dissolved, and the fracture

seemed as if it had never been consolidated. Indeed, the effects of this disease were in almost every instance wonderful, for many of our people, though confined to their hammocks, appeared to have no inconsiderable share of health, for they ate and drank heartily, were cheerful, and talked with much vigour, and with a loud strong tone of voice, and yet, on their being the least moved, though it was from only one part of the ship to the other, and that too in *their* hammocks, they have immediately expired; and others who have confided in their seeming strength, and have resolved to get out of their hammocks, have died before they could well reach the deck; nor was it an uncommon thing for those who were able to walk the deck, and do some kind of duty, to drop down dead in an instant on any endeavour to act with their utmost effort. Many of our people have perished in this manner during the course of this voyage.”

The men now dying five and six daily, it was determined to make the island of Juan Fernandes. On the 9th of June the land was seen; “it was a most agreeable sight, because at this place only we could hope to put a period to those terrible calamities we had so long struggled with, which had already swept away above half our crew, and which, had we continued a few days longer at sea, would inevitably have completed our destruction. For we were by this time reduced to so helpless a condition, that out of two hundred and odd men which remained alive,

we could not, taking all our watches together, muster hands enough to work the ship on an emergency, though we included the officers, their servants, and the boys." "To so wretched a condition was a sixty-gun ship reduced, which had passed straits Le Maire but three months before, with between four and five hundred men, almost all of them in health and vigour." Owing to contrary winds, it was the 16th of June before they were enabled to land, "notwithstanding our desire of freeing the sick from their hateful situation, and their own extreme impatience to get on shore. On that and the two following days we sent them all on shore, amounting to one hundred and sixty-seven persons, besides twelve or fourteen who died in the boats on their being exposed to the fresh air. The extreme weakness of our sick may in some measure be collected from the numbers who died after they had landed on shore; for it has generally been found that the land, and the refreshments it produces, very soon recovers most stages of the sea-scurvy; yet to our great mortification it was near twenty days after landing before the mortality was tolerably ceased, and for ten or twelve days we buried rarely less than six each day, and many of those who survived, recovered by very slow and insensible degrees."

In another ship of the squadron, the *Gloucester*, the disease was still more fatal, three-fourths of her crew having perished. The total loss of the ships are thus summed up at the beginning of September.

On board the *Centurion*, 292 had died, 214 remained alive ; on board the *Gloucester*, 292 had died, and only 82 remained alive. “ On board the *Tryal*,” says the narrator, “ it might be expected the slaughter would have been most terrible, as her decks were almost constantly knee-deep in water, but it happened otherwise, for she escaped more favourably than the rest, since she only buried 42, and had now 39 remaining alive.” Soon after, the expedition proceeded upon its warlike mission, and the health of the crew was good until a few weeks after leaving the coast of Mexico, when the scurvy again broke out, while they were *in a warm climate*, a circumstance which refuted the notion that the severe weather suffered in passing the Horn had caused the disease. “ But the ravages of the distemper in our present circumstances soon convinced us of the falsity of many prevailing opinions on the cause and nature of the disease.” For, notwithstanding abundance of fresh provisions, wholesome water, and a careful cleansing and ventilation of the ship, the disease still raged with as much violence as ever—inasmuch as the author continues, “ the cure and prevention of the malady is impossible to be effected by any management, or by the application of any remedies which can be made use of at sea. Perhaps a distinct and adequate knowledge of the source of this disease may never be discovered.” But he suggests that it may arise from some poison imparted to the air by the sea. In the run across the Pacific,

the *Gloucester* was abandoned and destroyed—and on reaching land, all the hands they could muster capable of duty from the united crews of the three ships, which had consisted of near one thousand men, were no more than seventy-one. But on landing their sick and supplying them abundantly with acid fruits, the mortality ceased. On the two days previous to landing, they lost twenty-one men; but during the two months they remained there, they lost but ten.

The expedition of Captain Cook to the South Seas formed a striking contrast in all its parts to that of Anson: it was the first of importance fitted out wholly for scientific purposes, and without any design whatever of violence or gain. The prudence of the commander and the employment of the remedies which had happily been discovered about this time, enabled him to return home after three years absence, with an unprecedented small loss of life, and was a vast encouragement for the many subsequent voyages undertaken solely for the purpose of benevolence and the advancement of science; and since the commencement of the present century, sea-scurvy has been almost unknown; a few sporadic cases,—just adequate to give us the conviction of the blessing of having escaped so dreadful a malady,—are all that we at present experience of that disease.

SECT. VIII.—HISTORY OF MALIGNANT OR ASIATIC
CHOLERA.

THIS disease, now so well-known, had, like many others, its origin in the east, but unlike all others, we are able with positive certainty to fix on the time when, and the place where, it came into being—we depend not in anything which concerns it upon vague tradition or report. Its birth-place was situated, perhaps, more favourably for distinct observation than any place which could be named. On the 28th day of August, 1817, it was reported to the government of India, that a malignant disease, to which from some few points of resemblance the name of cholera was given, had appeared in the populous town of Jessore, situated sixty-two miles from Calcutta,—that it was attacking all classes of persons indiscriminately, and destroying from twenty to thirty persons daily. “The inhabitants, astonished and horrified at the unaccountable and destructive inroads of the pestilence, fled in crowds to the country to escape impending death. The district functionaries closed the civil courts, and business of all kinds was abandoned.” In a few weeks ten thousand of the inhabitants of the district perished. On the 15th of September the disease was reported at Calcutta, and in the course of the month it spread itself over countries, extending four hun-

dred miles in length, and the same in breadth. It ravaged all Bengal, and then extended to the provinces adjacent, following the course of the Ganges, its navigable tributaries, and the high roads, and on the 6th of November its presence was announced in an army under the command of the Marquis of Hastings, consisting of ten thousand fighting men, and eighty thousand camp-followers, encamped in the provinces of Allahabad. The first cases were observed amongst the camp-followers, and excited but little alarm, but it soon spread in every direction and to every class of persons. By the 15th, it was diffused throughout the camp, and from that day to the 20th the mortality became enormous, appalling the stoutest heart. Europeans and natives, soldiers and camp-followers, alike sank within its death-grasp. The only apparent advantage the strong possessed over the weak, was a postponing of the catastrophe for a few hours. The English soldiers died within six or twelve hours after the attack,—the natives within three or six. Sentries were seized at their posts, and being carried in, had two or three successors before the two hours' duty were performed. The camp wore the aspect of a general hospital. Nothing was heard amid an unnatural stillness but the groans of the dying and the wailing for the dead. In those five days the deaths amounted to five thousand. Suddenly, the spread of the disease ceased; after the 23d, few new cases occurred, and these were mild and

tractable. "The PRESIDING INTELLIGENCE," says Mr. Kennedy, from whose able work these facts are derived, "who permits the growth of physical evil to serve, doubtless, as an agent in the production of ultimate good, has also determined the limits of its increase." During the year 1818, the disease spread in all directions over the countries of Hindostan.

We may well adopt the language of Dr. Friend, respecting the small-pox, as still more applicable to this disease. "Perhaps from the time of Hippocrates to this very period, there never happened anything so remarkable in physic as the appearance of this new and surprising distemper." That this was a new disease, previously unknown to all mankind, there can be no doubt entertained by any person who will carefully attend to the evidence, and that it sprang up under circumstances peculiarly favourable for its investigation is equally certain. A vigilant and powerful government, having under its chief control as able and well-educated a body of medical men as the world could at any period of its history afford, under an organized and enlightened superintendence, leaves us no point of its history which the human faculties can penetrate, unexplored. That the name given to it, "Malignant Cholera," was calculated to convey the false impression that it was either identified with, or very similar to, the disease which as cholera-morbus has been for ages well-known, though more frequent in hot

climates, yet also in this country,—that the name was inapplicable was quickly perceived, and so pronounced by the Medical Board of Bombay.

There were not, of course, wanting persons who, not having seen it, were ready to deny that it was a new disease; but a collection of every recorded case of disease which was supposed to indicate its prior existence, was made by Dr. Bisset Hawkins in his history, and they clearly prove that there is no evidence for such an opinion; they leave the fact of its being a new disease indisputable.

The eyes of the profession in this country were from that period anxiously turned toward it, and the reports and descriptions of our brethren in the East; and as the disease crept on from town to town, and from country to country, we (in London) at a very early period anticipated that in process of time we should have a personal acquaintance with it, which eventually happened in 1832. It is interesting to trace the progressive steps by which this disease reached the British metropolis. In 1819 it ravaged Ceylon and the Mauritius. In 1821-2, Arabia and Persia. In 1823, Russia first experienced this malady. It successively declined and revived in various parts of that great empire; taking the lines of the great rivers, and the most frequented channels of intercourse, it spread itself over every part, and into the adjacent countries; and in 1830 and 1831 it burst out with still more fatal violence, traversed part of Germany and the Netherlands, and reached

England, first appearing at Newcastle, October the 24th, 1831.

As it approached, and especially after it reached, our shores, of course the most vehement discussion immediately arose amongst our controversial profession upon every point involved in its past history, and respecting its mode of propagation, nature, symptoms, and results. Few practitioners in this country had not the opportunity of exercising their judgment upon it. It passed over the land in its length and breadth; and although there were not wanting wrong heads, “who seeing would not see,” despising facts and resisting conviction, the fair conclusion of the judicious and candid, (if my own judgment be not greatly at fault,) was that Cholera of 1832 was a *new disease*, that it propagated itself by contagion; but that in passing from individual to individual, and from place to place, it exhibited so much capriciousness and such strange diversities, as to puzzle the most ingenious inventor of hypotheses, and to confound every general conclusion, save this,—that no physical theory could embrace its facts.

The mortality in the metropolis was infinitely less than could have been anticipated, from its former history, by the most sanguine. The Bills of Mortality gave only 3,200 deaths from cholera in 1832; 1,150 in 1833; 5 in 1834; and 2 in 1835. Where there was the concurrence of testimony from nearly the whole profession, individual observation bears a small comparative value; but the writer studied the

disease as it prevailed in his district with deep interest, and seemed able in most cases to trace contagion, while of the novelty of the disease he could not entertain a doubt. The common cholera, as it occasionally prevailed in London in the autumnal months, had been long familiar to him, but this disease bore little resemblance to this, except in name. The attack was oftentimes sudden and unexpected, in other cases preceded by a diarrhœa, great prostration of strength, immense evacuations of fluid, exactly resembling dirty rice-water, a peculiar slaty-blue colour of the whole body, feeble, almost imperceptible pulse; severe spasms, attacking first the extremities, but soon extending over the whole body; the mind clear, and senses perfect to the last; the end speedy, unless remedies found an action, which only happened in milder cases. Every remedy was tried, but none has yet been discovered so palpably useful as to challenge general adoption. The worst cases which recovered under the author's eye were treated with immense quantities of the chloride of mercury.

The disease spread in 1832 over the whole kingdom, and the curious phenomena was observed in many places, of towns altogether escaping, while surrounded with others where it fell with great severity. Thus, for example, Cambridge escaped, although one of its suburbs is scarcely exceeded in a crowded population, filthy habits, and immorality, by any in the kingdom. The disease proved fatal alike in the

agricultural and manufacturing districts, to a large proportion of those attacked; but the number of these was to the amount of the population extremely small. Ireland suffered more, but in a far less degree than the continent of Europe. It spread alike over countries where the most rigid quarantine was observed and where no precautions were taken, in all seasons and every kind of weather.

Within a few weeks after its appearance in London, cholera invaded France, and was especially severe in Paris. Within ten days from its announcement there, 7,000 cases were reported, of which 3,600 terminated fatally; these occurred within the barriers; but it is believed the mortality was at least one-third greater, and that the suburbs of the city suffered even more. In the *Lancet*, No. 450, a powerful writer says, “What is the nature and what the laws which govern this anomalous pestilence? How strange, how inexplicable are the facts we have to contemplate. In Paris, not more than five days before the onset of this disorder, M. Villarme, in a *Memoir on Epidemics*, read before the *Academie de Médecine*, congratulated his fellow-citizens on the probable, nay, almost certain immunity they were to enjoy from the cholera, as well as other similar visitations. ‘Paris,’ he said, ‘exceeded all other cities in the extent of its civilization; the inhabitants of that capital were the strongest in moral courage of any nation in the world,—were unrivalled in physical energy.’ It was superintended and controlled by

an excellent and indefatigable medical police, no nuisances there existed, all were carefully removed. . . . In short, the provisions of the *code sanitaire*, taken along with the circumstances of the citizens, were either to defend them altogether from cholera, or to divest the disease of its sting. But what proved to be the fact? From the prime minister, the peer, the deputy, and the general, to the pauper *chiffonier* and *debandeur*, all classes of inhabitants have been smitten, and in equal rates to the proportion which they bear in numbers to each other. The timid and the brave, the weakly and the robust, from the infant to the decrepit man, all suffer from the scourge." In a few days 10,000 persons perished.

It is unnecessary to follow the migrations of cholera from country to country all over the world; it seems to have produced no appreciable change in the amount of population; it has much varied in severity in various places, but it has spared no people. Perhaps we cannot reasonably assign to it any especial office; it has, however, shown to all the world, at a point of its history when such a demonstration may be greatly needed, the weakness of all science; and at the moment when our philosophy has shut out all belief (dependent upon observation) in spiritual agencies as operating upon material things, it has offered a visible token of God's unceasing rule. It has,—just at the approach of the twentieth century from the period when faith was the established principle of reception for divine truth,

—left the ignorant and obtuse only to adopt the reproach of the scorner, and to say, “Where is the promise of his coming? for since the fathers fell asleep all things continue as they were from the beginning of the reation.”

SECT. IX.—NEW DISEASES OF MINOR IMPORTANCE.

THE preceding histories may suffice for the present to establish the fact of diseases being called into existence at various and successive times ; many of less note may be pointed out, which would afford interesting illustrations of the inferences to be deduced. A careful research into authors would probably bring out further truths, but it does not meet my present purpose to pursue it. It might be shown that *influenza*, an oft-recurring epidemic, is the form of disease produced by atmospheric changes. That a periodic cholera seems attached to certain changes in the weather incident to autumn. That many diseases have appeared, run a course, and vanished ; even epidemic diseases of the mind, as the dancing mania. Others have become permanent residents, and daily enact their part in the tragedy of life, as hooping-cough and scarlatina ; of the modern origin of the latter few persons entertain a doubt, and it is thought the time and manner was as follows.

A disease, which was called by the Spaniards *Ganotillo*; by the Italians and other nations, *Morbus strangulatorius*, *Pestilens faciem affectus*; in English, malignant or putrid sore-throat,—appeared first in Spain in 1610, spread from thence to Malta, Sicily, Otranto, Apulia, Calabria, and the Campagnia, in the space of a few years, and broke out in Naples in 1618, ravaging for twenty years different parts of that kingdom, and appears to have presented itself to the notice of physicians in London in the year 1739.

To Dr. Fothergill we are indebted for an able and interesting history and description of it, and his opinion of its specific difference to all other diseases, and its recent origin, appears incontrovertible. It was an extremely malignant disease, especially attacking and proving fatal to children; and, according to the opinion of most men, spread by contagion, as it was sometimes observed to carry off whole families, and to spread to those places first between which and the countries affected by it the communication was most frequent. This disease commenced its attack in the morning, like fever, with a severe chill, followed by great heat, which alternated for some hours, when the heat became constant and intense. The patient then complained of acute pain in the head, stiffness of the neck, soreness and pain in the throat, and sickness. The face became red and swelled, the eyes inflamed and watery, with restlessness, anxiety, and faintness. The interior of the throat is at first swollen, livid red and tender, soon

becoming sloughy and ulcerated. The fever goes on increasing, the throat swelling and sloughing internally; the neck, externally, tender and swollen. Petechial spots, erysipelatous patches, cover the extremities, delirium, and then mortal coma. Sometimes fatal bleeding from the mouth and nostrils, or a diarrhœa, vary in various cases the fatal termination. Medicine was able to do little in this disease, which, like so many others, has subsided, occurring only now and then, sporadically,—unless scarlatina is a milder form of the same disease, which is the opinion of many.

It may be here supposed by the unprofessional reader, that new diseases are brought into existence by the changes in manners, habits, food, and clothing, which take place in society as time rolls on; that these circumstances blot out some and give rise to other diseases previously unknown. This, so far as regards *species*, is not the case. It is true, that whilst the advance of civilization gives certain classes an immunity from some diseases, it produces modifications in others; varies their form and features to a remarkable extent. This would be an interesting subject for a separate investigation, which would be aided by the analogy of horticulture and floriculture. By varying the food and climate, time and mode of propagation, changes are produced in vegetables so great, that it is difficult to discover in the varieties, the normal form whence they are derived. In like manner, changes in diseases may

be traced, and the writings of acute observers in all ages, compared with what we now see, would enable us to understand the nature and extent of the modifications diseases undergo from those causes. But the topic cannot be pursued here.

SECT. X.—INFERENCES FROM THE HISTORY OF
EPIDEMICS.

MANY and most important questions are involved in the facts detailed in the foregoing history of pestilences, some of which are obviously irrelevant to the purpose of this work, whilst in others we shall find matter of serious contemplation, and most weighty arguments to establish the great truth of an interposing Providence,—a proof that God exercises a constant and intelligent control over human affairs. The first point to be determined is—How are epidemic diseases propagated? In what manner does disease, which from its nature would seem to belong to individuals, become spread over communities and countries? This question has frequently been debated with great warmth; it involves not merely an interesting point of science, not merely a question of life and death, but one touching the wealth of nations, as well as important considerations of national policy. The great diligence this has excited in the accumulation of facts, in the study of diseases, has

brought these to be better known than their transitory appearance would otherwise have permitted, and so far has given us a greater degree of assurance of our data from whence we would deduce our conclusion. The most familiar general principle which is admitted as established upon this point, is that in the human body, suffering from certain diseases, a poison is generated which bears a striking analogy to a ferment, since if it be conveyed by inoculation into another healthy body, it produces the same disease, and another quantity of similar matter, and is thus capable of self-propagation. We have an instance of this in small-pox; the smallest quantity of the matter from the pustules of small-pox inserted into a healthy body begets the same disease. This most familiar and apparently simple truth gives us the best ground to believe that a matter is generated even where the eye cannot perceive it, nor any instrument detect it, which by simple contact of the body, without artificial insertion, will also communicate the disease; and it has been observed constantly that diseases are thus propagated from individual to individual. This mode of propagation has received the name of *Infection*. But it is also deemed quite certain that actual *contact* is not in every disease essential to its communication; it has been incontrovertibly proved, that persons only coming near the sick, as into the same room, have received the disease under which they were suffering, and this method of propagation is termed *Contagion*. It is supposed

that a matter is generated, although invisible, as in the former instances ; but that in this case it is either dissolved in, or diffused through the atmospheric air, and poisons those who breathe, or come into contact with it. It would also have been universally received as established, if men's interests and passions did not lead some to deny the fact, that the fomites of disease,—the poison,—has frequently become attached to articles of clothing, woollen or cotton goods, or to these substances in unwrought bales, and has thus been conveyed from one part to a distance, and there excited the disease.

That all these methods of propagating disease are in some instances common to one and the same malady, we have abundant evidence, and this truth has been known from the earliest ages. The precautions enjoined in the Mosaic laws respecting the leprosy, manifestly imply that accidental inoculation, infection, and contagion, might all propagate it. But there are innumerable facts on record of the rapid spread of diseases, which require some addition to the theories of infection and contagion. The suddenness with which some diseases seem to invade countries, their almost simultaneous appearance in many places, require us to believe the poisonous agency is so highly diffusible and subtle, that it bears no resemblance to any known form of ponderable matter ; hence it has been conjectured that nothing less than some fault in the constitution of the air itself, some variable condition of its electric state,

should be looked for as the cause ; and in the cases of plague, cholera, and some others, it has been supposed that these or similar external physical agents acting as poisons, may be adequate to produce all the phenomena of the disease, without the formation of any contagious matter whatever. It has been already shown that the only poison which is known thus to produce disease, gives us a clear evidence of its agency in the intermitting character of the symptoms ; and it is a palpable fallacy to apply the facts of one case to another quite dissimilar. The occasional spread of endemic diseases beyond the usual limits of their range, and the desire which exists in some interested persons to obscure those truths which imply the contagious nature of other diseases, has too often led to their being confounded. But the great pestilences, the history of which we have traced, are so entirely dissimilar in all their characters to the endemic diseases arising from marsh poison or malaria, that we must still consider the inquiry open—To what cause are they to be referred ? Do we *know* of any material agent, which, acting as a poison in the human body, produces them ? This is a question altogether different to that concerning the mode by which these diseases are propagated when once they exist. And if we are enabled to detect the agent or the cause, should we not then naturally inquire how this first came into operation ? Why did it lie dormant for ages, and then commence its morbid influence upon the human race ? The

former of these questions has given rise to many hypotheses; but the latter, although involving an element which ought to be included, has never been considered a subject of inquiry.

No satisfactory hypothesis has at present been proposed to embrace the recorded phenomena. Comets, meteors, planetary conjunctions, earthquakes, volcanoes, some alterations in the constitution of the atmosphere, variations of temperature, of moisture, emanations of subtle effluvia from the earth, parasitic animals or animalculi, have all at various times been proposed to explain the origin of new diseases, to account for pestilences. In the present state of science, some of these are refuted by being mentioned. Several remarkable coincidences in the appearance of comets and meteors with pestilences, naturally enough gave rise to the idea of their connexion as cause and effect, and as there always must be some such coincidence with the conjunction and the relative bearings of the planets, astrologers have found no difficulty in explaining their origin to their own satisfaction. These may now be disregarded, and so with volcanoes and earthquakes; the latter, indeed, by indirectly producing endemic diseases, have been regarded as a true cause. Under their influence,

“The rocks fall headlong and the valleys rise,
The rivers die into offensive pools,
And charged with putrid verdure breathe a gross,
And mortal nuisance into all the air,”

the same in kind and in effect, as that sent forth in marshy and undrained countries. If earthquakes stir up, or volcanoes eject, any subtle effluvia which are spread temporarily and over limited spaces of the earth's surface, inappreciable to chemical tests, they are not known to us ; indeed the neighbourhood of volcanoes is generally remarkably salubrious, and no instance is on record of the commencement of a pestilence in such a vicinity. Famine, indeed, kindles disease, but it is widely different to those of which we are speaking. The constitution of the atmosphere has been a favourite refuge to satisfy ignorance, and it was a most interesting inquiry for chemists to determine whether this compound fluid, which is so essential to the existence and support of animal life, ever varies in its composition, either by the diminution or increase of any of its component parts, or becomes mixed with any aërial poison. For many purposes and at many various times chemists have investigated atmospheric air, and the result has been, that in every situation,—on the tops of mountains, on the surface of the sea, in the midst of the most extensive marshes, in vases buried eighteen hundred years in Pompeii—everywhere, and under every variety of circumstance, it does not differ in its composition, nor does it contain any appreciable foreign substance. Nevertheless, it must be admitted, that chemists cannot have yet attained the skill to ascertain all its properties, since its influence upon the human body is so widely differ-

ent at various places. The hypothesis of a foreign poisonous substance dissolved in the atmosphere will not account for the origin of small-pox, sea-scurvy nor cholera: indeed the specific character of each pestilence, requires us to seek an especial cause for each.

The rise and spread of pestilences in every age has afforded opportunities for men, under many and various modes of thinking, and during very different epochs of science, to try their skill in the solution of this great problem. Probably most persons will think that in the present state of science, especially considering the great advancement of chemistry on the sure basis of experiment and induction, we have a better prospect of success in the attempt than ever was before possessed, and we may therefore first inquire to what cause or causes the origin and prevalence of cholera can be referred. It arose, as we have seen, in the town of Jessore, “ a dirty, ill-ventilated place, surrounded by jungle, and exposed during the rains to effluvia of an immense quantity of stagnant water,” situated in the province of Bengal, under the eye of observers not likely to overlook any antecedent or concomitant occurrence. No comet, earthquake, meteor, nor inundation was observed; as to planetary influence, that may be left out of the consideration. No remarkable atmospheric changes were witnessed. Jessore did not then become a crowded town, nor was its locality then first environed with jungle,

tanks, a moist soil, or extensive sunderbunds—all these had existed for ages. “It is generally admitted,” says Dr. Bisset Hawkins, “that no marked peculiarity of the weather was observed previously to its appearance, and it does not appear to have been at all affected in its severity or progress by the circumstances of season, temperature, or moisture. It was observed to have prevailed with equal violence when the thermometer was at 40° or 50° , as when it stood at 90° or 100° ; during the prevalence of incessant rains for months, and when the face of the earth was scorched by long-continued heat and drought. The disease was uniform in its principal features, and attacked almost indiscriminately people of all nations and constitutions, both Europeans and natives.” When the disease attacked Calcutta in September, it is said by persons on the spot, that “the fluctuations of the barometer and thermometer were exceedingly small, and the other atmospheric phenomena were regular.” No circumstances whatever can be discovered which offered any explanation of its origin. Is it then unphilosophical to say, that it owed its beginning in 1817 to the same agency as we are informed gave birth to light,—when God said, “Let there be light, and there was light.”

After this disease came into being, its subsequent history, its extension from country to country, and all over the world, also demands our faith in an immediate interposition of Providence. We have seen

how sudden was its irruption into the capital of France, and how fearful were its ravages there. The same writer already quoted, page 332, says in another paper, "The malady might have been introduced into Paris, from without, by human intercourse. Nevertheless, some other cause may have contributed powerfully and fatally to its propagation. What this cause is, we know not, and we know that no one else comprehends it. We cannot speculate upon it. We believe it, in short, to be at present beyond the limits of human comprehension. But we know full well *what it is not*. It is not the nature of Parisian food, for the food of Paris has been of the same kind for centuries, and has generated no such disorder. It is not the filth of Paris, for Paris is less filthy by an infinite number of degrees than it has been for many years. It is not, in short, any one of those things of which human senses can take cognizance; for all of these things have never given birth to the prevailing disease. . . . While we thus, however, readily admit the irresistible evidence of facts, we cannot reject the equally forcible testimony which teaches us that the pestilence *can* spread from one individual to another."

In a subsequent paper, tracing the history of the disease, he alleges the conclusiveness of the facts for its contagious character up to the moment of its general prevalence in England, but he maintains that then some more general cause became manifested, and proposes the remarkable opinion, that the

remote cause of the disease, operating upon the community, prevents the spread of the disease from body to body. "We incline," says he, "to the impression that the presence of an epidemic cause, is to a certain extent a protection against the human poison; or in other words, that it is in places free from the *epidemic* that the disease can spread from person to person." Again, on May 5, 1832, he says, "The recent epidemic having baffled alike the theories of the aërialist, of him who placed his faith on terrestrial emanations, of the animalculist, the electrician, and the astronomer, has shown us at least thus much, that while we must admit the operation of a powerful contagion, and while some circumstances denote the simultaneous action of an unknown and more general agent, there was at any rate a state of constitution abroad which defended the mass of our citizens from either, or both, of these intrinsically destructive poisons. Taking up which side of parties, which view of debated questions we may, one thing is at least clear and palpable, that it is quite as difficult to understand why of thirty persons residing in the same house, and under apparently similar external circumstances of air and food, raiment, health, habits, and occupations, two should suffer and twenty-eight escape. If this circumstance opposes the opinion of contagion, it is plain that it is quite as adverse to any other speculation concerning the causes of this disease."

The history of every pestilence presents the same

phenomena, the same difficulties in the construction of a physical theory. In the controversies respecting the plague, many facts are indisputably established, opposing every attempt and excluding all hope of their being reconciled. Thus, the spread of the disease in all seasons, directly against prevailing winds, and its attack upon places where it could be traced to a stray traveller, an article of dress, or a package, seems to prove contagion. When the plague last raged in London in 1665, a parcel of clothes were sent to Eyan, near Tidewell, in the Peak of Derbyshire, and the plague with it, which there destroyed, in a short time, two hundred and sixty of the inhabitants. The ship which conveyed the plague to Marseilles in 1720, was unequivocally ascertained, as was that which bore the cholera to the Mauritius. On the other hand, instances are on record where plague has broken out in many places simultaneously, which were remote from each other, and where it was impossible to have arisen from human intercourse.

Again, exposure to the most concentrated fomites has often failed to excite the disease, where escape would appear almost miraculous. The following circumstance was related to me by a physician, who had it from Dr. Mac Guffog, a physician practising in Constantinople when it occurred. In 1812, the plague raged most fearfully in that city, and swept off hundreds daily. The clothes of the victims became by a law the property of a public

officer. The Ottoman army being at that time greatly in want of clothing, that belonging to the plague patients was, as it was stripped from the dead, thrust immediately into packages, and sent to the soldiers, was adopted and worn by them without any precaution, and no case of plague occurred in any of the several places where the different divisions of the army were posted.

Why, and how, are the limits of these visitations fixed? Why do they fall with fatal severity upon one city, town, or country, and leave others untouched? The hypothesis suggested in the quotation above, is very ingenious to account for *one fact*, namely, the disease not spreading to every one coming in contact with the affected. But why does not the wide-spread epidemic cause, poison the whole community? We have but one reasonable answer to return to these queries. The origin of pestilences can be referred to no adequate and efficient *second* cause. Their progress, limits, and termination are equally inexplicable upon mere physical theories. If we could discover a natural agent, a poison capable of producing such disease, how shall we account for its *first* commencing its operation upon the human race? Why did the poison lay dormant, since man's creation? What excites it into action now for the first time?

It is universally admitted that the comet, earthquake, flood, and hurricane, were never more than coincidences with the rise and spread of pestilences,

but it is not denied that there may be in some instances physical agents as secondary and instrumental causes, which hereafter may be discovered.

Dr. Prout has shown that the vapour of the metal Selenium, escaping into the apartment where he was experimenting, produced a catarrhal affection, very similar to influenza. And, in a late work, the same chemist says, he had been for six weeks engaged in attempting to determine the weight of a given quantity of air under precisely the same circumstances of temperature and pressure, when on the 9th of February, 1832, the positive weight of the air suddenly appeared to rise above the usual standard. The wind in London had previously been west, it now suddenly veered round to the east, and remained steady in that quarter until the end of the month. The weight of the air remained above the standard all the time the experiments were continued, which was about six weeks longer. On the first change of the wind, the first cases of cholera were reported in London.

Dr. Prout seems to think that an impression was made upon every human being, a change in the chemical constitution of the secretions, the perspiration, &c., at that time, which has not yet ceased to exist. He supposes that a heavy gaseous principle, feebly diffusive and poisonous to human life, crept along the earth's surface. In these interesting remarks of Dr. Prout, we find the only approach to a definite ex-

planation of the vague conjecture of Sydenham, that diseases are owing to an “epidemic constitution of the air;” which without some more precise knowledge of a change of constitution—by some addition to, or subtraction from, its composition, is little better than the definition of light by the schoolmen, that it is the act of being luminous.

This hypothesis of a heavy poisonous gaseous addition to the atmosphere, it is scarcely necessary to say, fails to explain many of the most prominent facts of epidemic diseases, and involves the additional difficulty of requiring, not one or two, but many peculiar substances of the existence of which we have no proof; inasmuch as every analogy derived from toxicology is opposed to the supposition that one and the same poison could give rise to diseased states, so diverse as plague, small-pox, measles, and cholera. Nor can we, with any greater probability, attribute these or any other epidemic diseases to variations in the electric states of the atmosphere, or to any form of electricity; we have no evidence that this agent ever acts in the manner of a poison on the human body; indeed, if we are to judge from the attempts which have hitherto been made to employ it medicinally, it exerts no action of any kind, either for good or ill, in reference to diseases.

It was, perhaps, more ingenious to suggest the possibility of the dependence of some pestilences, as the plague, upon some of the insect tribes, or rather some kind of animalculæ. The curious facts ob-

served respecting the sudden increase, rapid and apparently fortuitous migrations, and mysterious disappearance of certain insects, in all which there is a close analogy with the facts respecting epidemic diseases, are themselves as inexplicable as the latter, which they are adduced to explain; insomuch that Dr. Macculloch considers they afford the most striking instance in nature of the visible influence of the Deity, whose agents they are, in the production of great effects. The hypothesis we are considering requires us to admit that the same peculiarities of propagation and extinction prevail amongst animalculæ. But the fatal objection to it lies in the circumstance that no such creatures have ever been detected, even by the aid of the most powerful microscopes.

Whether we may ever be able to detect any physical agent or agents, as the cause of plague or other pestilences, or not, the fact of their recent origin cannot be disputed, and this is all that is absolutely necessary to prove for our present purpose. It does not in the least weaken our confidence in this conclusion, to discover in new diseases a close resemblance to others previously known, that their features, effects, and laws, had been very similar. However close the analogy, however numerous the points of resemblance, if we are sure of true specific differences, as we are in the epidemic diseases treated of, we are safe in pronouncing them *new*. Were an animal, unknown to naturalists, to

appear in any country previously well explored, it would not obscure the evidence for its novelty in their estimation, should it be found modelled on the same type as other existing species, or could it be classed with some known genera. The origin of new diseases at various successive times, and under our own eyes, when established as a physical fact, gives support to, and strikingly illustrates, the scriptural doctrine of diseases having been from the beginning imposed upon mankind, and proves that they are not essentially necessary to the living animal body. This is not the only proof of that doctrine to be found in nature, but it is one of many hereafter to be adduced.

It is not merely in their origin that pestilences are demonstrably referrible to a superintending Providence, but their effects also prove the same great truth. We have already seen and traced these, so far as they influence the changes in the dominance of races among the human species, upon population, and as punishments for moral turpitude; but their *immediate* moral effects, the conduct they excite in the sufferers and spectators of their terrific visitations, constitute a part of their history which must not be overlooked, an element which a true philosophy must include in their theory. We have already seen, in the quotation from Thucydides, how fearful were these effects at Athens upon men, “without hope and without God in the world.”

The christian emperor, who witnessed the great

plague of the fourteenth century upon his subjects, says, “that while many gave themselves up to despair, others cast aside their vices, practised virtue, gave their goods to the poor, repented of their sins, and cast themselves piously upon the Divine goodness, thus triumphing over the disease, or meeting death, with hopes full of immortality.” The moral effects and tendencies of pestilences have appeared more conspicuous in the plague than in any other. When death in this fearful form has ravaged a city, it has brought out into strange prominence men’s moral characters; calling forth from the good the exercise of unbounded charity, piety, devotedness to God, ready and uncomplaining submission to the Divine will; and exciting the bad to the illimitable aggravation of their sins, by developing their natural impulses into actions in the absence of all present punishments. At Marseilles in 1720, and in Messina in 1743, not only did men act upon the principle, “Let us eat and drink, for to-morrow we die,” but their depraved imagination gave birth to unheard of crimes; theft, violence, murder, were too common and too little remarkable—they must proceed to a depth of diabolical wickedness, of which the recital almost passes belief. As the dreadful visitation proceeded, the principle of the prophet was verified, which makes the effect of the extreme punishment upon the impenitent, to be that “they but revolt more and more until the whole head was sick, and

the whole heart faint !” In the midst of danger and death, the christian man is distinguished by conduct most opposite to this ; sustained by his faith, he exhibits undaunted courage and exercises a more extended charity. Thus these diseases become a moral touchstone, separating “ the precious from the vile,” proving, like all afflictions, to the believer “ a means of elevating his mind to high and heavenly things,” and to the impenitent a “ dangerous downfall whereby he is thrust into desperation.”

Not only in their origin, spread, and moral effects, but in the circumstances of their termination, we are enforced to deduce the same inferences. It is inconceivable that the wide spread of the epidemic cause, even if it introduced a new mode of propagation, should in any way account for its sudden cessation. Plague, cholera, and small-pox, have exhibited this curious fact, that when the disease is most abundant, when the centres of contagion, the founts of the poison, are most numerous, this is just the moment when it is commonly checked—in rare instances the diseases cease to spread from lack of victims. This sudden and inexplicable cessation of epidemics, at the very moment when cities and communities have been threatened with total destruction, has been frequently witnessed. It is recorded of the plague of London of 1665, which prevailed in its greatest severity during the autumnal months ; and in December, says Dr. Hodges, in *Loimologia*, “ the people crowded back as thick as

they fled, business was resumed, and the houses, rooms, and beds, where persons had died, were again occupied without cleaning or other precaution."

When all human endeavours have proved unavailing, when the disease has attained to its climax, why does it then cease? We maintain the truthfulness and genuine philosophy of the reference of their origin, spread, effects, and cessation, to the Divine agency.

Again, there is another point to be considered, in a comprehensive view of pestilential diseases. We have seen that certain pestilences have made a decided diminution in the numbers of mankind, destroying utterly some peoples and leaving others with greatly diminished numbers. Dr. Hecker, in his history of the great plague of the fourteenth century, observes, "After the cessation of the black plague, a greater fertility in women was everywhere remarkable, a grand phenomenon which, from its occurrence after every destructive pestilence, proves to conviction, if anything can do so, the prevalence of a higher power in the direction of general organic life. Marriages were almost without exception prolific, and double and treble births were more frequent than at other times."

A similar increased fertility in the human race is, at this day, witnessed on an extended scale amid our transatlantic brethren. We have seen that in the mysterious course of Providence, the small-pox swept that vast continent of its aboriginal inhabitants, just

before events in England drove multitudes of exiles to find a home there, and room was thus furnished for the uninterrupted increase of the Anglo-Saxon race, which now so wonderfully and inexplicably appears destined to outnumber and absorb so many branches of the human family. These facts must be associated with the origin of new diseases, the prevalence and extensive mortality of pestilences, and then what other theory can we admit, what conclusion can we deduce from our undoubted premises, different to that of the Psalmist, who, in contemplating the manifold works of God, and the fluctuations in the destiny of living beings, attributes all to his omniscient providence, and exclaims, “Thou takest away their breath, they die and return to their dust: Thou sendest forth thy Spirit, they are created, and thou renewest the face of the earth!”

In a recent publication upon the sanatory condition of the poor, there is a section entitled, “Proof that pestilence or excessive mortality does not diminish population.” Whilst we may remark that the facts adduced in that work have no reference whatever to the historical records of the great pestilences we have attempted to trace, and are therefore in no way opposed to our inferences, we find too curious and interesting an illustration of the present truth to be passed over. The work in question shows, from statistical observation, that in those districts of this country where the mortality is greatest, there is the

greatest number of births ; and, moreover, when any temporary increase of mortality is perceived, a corresponding and even more than a proportionate increase in the number of births immediately follows. To infer from this,—and no other proofs are offered,—that pestilence *never* affects the amount of population, is obviously erroneous, and illogical. It proves that in the control of human life, in the increase and decrease of the population of a country, an unseen but vigilant and all-powerful hand is continually exercised. It proves the inadequacy of physical science to explain the most palpable facts ; and it ought, if we would claim the prerogative of rational beings, to enforce submission to that authority which affords a satisfactory solution of the matter, and which throws contempt upon the short-sighted policy, and immoral legislation which attempts to check population.

And when we have proved the agency of a superintending Intelligence in producing and controlling diseases, limiting and extending human life, proceeding by a succession of creations to the development of his designs ; and when to this fact in medicine we add the analogous truth made known to us by geology, of successive steps in the production and perfection of the animal creation, we arrive at a profound analogy in nature with the revelation of the Being and proceedings of God in the Holy Scriptures. We see the Deity subject in his government to the law of succession, to Time, limiting his power

by the use of means, to the laws of material elements; working in subordination to principles which every rational theist must attribute to Him as their institutor and upholder. We see *Him*, who, in his spiritual nature omnipresent and omnipotent, is veiled from mortal vision and apprehension, manifesting himself by thus stooping into the limited sphere of our faculties, and demonstrating to our reason that the only way by which we can approach the ineffable glory, is the consecrated way and medium of *Christ*.

To him who doubts the vigilance of God's superintending providence, who denies man's responsibility to acknowledge and bow himself before His authority, to pay to Him the homage of worship, to appeal to his forgiving mercy, by prayer, to present the offering of praise—to the deist—for these are the articles of *his* negative creed, the language intelligibly spoken by nature in these creative acts, convicts him of ignorance, condemns his false reasoning, or reflects a dark picture of his moral being. "Because I knew that thou art obstinate" says God by his prophet, "I have showed thee new things from this time, even hidden things, and thou didst not know them. . . . They are created now and not from the beginning . . . lest thou shouldest say, behold I knew them." Thus we learn, that the aim, end, or design, purposed by the Great Creator, in these successive creations, is to force upon the minds of his intelligent creatures, the conviction of

his existence and of his ever-abiding presence, that our FAITH, by which, after a spiritual manner, we apprehend and know him as our Creator, Redeemer, and Sanctifier, may be invigorated, and made to bring forth its fruits of love and holy obedience.

THE END.

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SYNOPSIS

OF

THE PROPOSED CONTINUATION OF

‘ THE GREAT PHYSICIAN. ’

THE STRUCTURE AND FUNCTIONS OF THE HUMAN BODY AND MIND, so far as this knowledge is necessary to understand the science of medicine, or bears upon revealed truth, under the following heads:—The *Elements* of which the human body is composed; the *Materials* made up of these elements; the *Mechanisms* and *Organs* constructed of these materials; the *Processes* performed by the mechanisms and organs; *Endowments* attached to the materials and organizations. Cosmical relations of the human body. Animal chemistry.

LIFE, its mysterious and hidden nature—known only by its effects—illustration it affords to spiritual truth.

MOTORY POWER, an endowment added to living structures.

SENSE, a higher endowment—range of this faculty in man, in animals—mechanisms devised for its exercise.

INSTINCT, intermediate between sense and mind.

MIND, in what manner known—hypotheses respecting, whether a unity, a compound of two separable parts, a trinity, or an aggregate of a multiplicity of faculties. Phrenology.

Revealed doctrine of a soul separable from the body.

The growth, maturity, and ageing of the body—In what sense is death an essential result of life?—Scriptural statements—their

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bearing upon modern science—Would life have been sustained by external means and appliances had man not sinned ?

Efforts of the human constitution to renovate itself in old age—meaning of this—curious instances.

The resurrection and immortality of the body—probable condition of a future state.

PATHOLOGY ; or the Phenomena, Laws, Causes, and Effects of Diseases, in their connection with Revealed Truth.

DISEASES, not disorders in the sense of confusion and uncontrollable disturbance, but imposed and ordered changes in the body, subject to definite laws, and evidencing intention and design—Sources from whence we may learn their ends or final causes, their character or qualities—Various methods of studying diseases—Qualifications necessary to their successful study.

THE PRINCIPLES OF DISEASE ; i. e. the ultimate elements into which all diseases may be resolved by analysis in the present state of medical science.

THE CAUSES OF DISEASE, their universality and evident arbitrary character—hence seen to be of Divine institution.

COMBINATION OF THE ELEMENTS OF DISEASE INTO GROUPS as they are presented in nature—The laws of their association—Synchronous and successive—Aggregates known by names constituting *Species*—Difficulties of determining species—Proofs that there are many, some clearly defined—Ignorance, folly, or wickedness of empirics in pretending that all diseases are **ONE**, and curable by one means—Sketch of certain false systems, Homœopathy, Hydropathy, and others—Suffering and loss of life from false doctrines, and popular delusions concerning medicine.

FORMS OR TYPES OF DISEASE : 1. In relation to a present state ; i. *Sthenic* or increased action ; ii. *Asthenic*, diminished power or action,—debility. 2. In relation to the law of successive changes : i. *Acute* or determinable in a limited time. ii. *Chronic*, indeterminable, continuous.

NOSOLOGICAL ARRANGEMENTS OF DISEASES. Descriptive medicine—No classification upon one principle successful—Analogy of other branches of natural history.

Cullen's classification founded on *Symptoms*—Mason Good's upon physiological functions—Various attempts to complete a classification—None hitherto successful.

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As a convenient aid to the memory, for the general student, diseases may be divided into ten groups, or classes, as follows :

I. **FEVERS.** *A.* Produced by poisons from inanimate matter. Intermittent fevers—Remittents—Marsh fever—Yellow fever—African fever.

B. Poisons transmitted from body to body not known to depend upon any form of inorganic matter. Plague—Typhus—Small-pox—Measles—Scarlet fever—Rose fever.

C. Fevers from other causes. Influenza—Hectic—Continued simple fever.

II. **INFLAMMATIONS.** A condition of disease termed inflammation occurs to every organ and every texture, and a group of diseases is thus very well marked, and a term applied to each, derived from its locality with the general termination *itis*. Cephalitis or phrenitis, inflammation of the brain, phrensy—Otitis of the ear—Iritis of the iris of the eye—Laryngitis—Bronchitis, parts of the windpipe—Pneumonitis—Pleuritis, parts of the lungs—Carditis, the heart—Gastritis of the stomach—Enteritis, the bowels—Hepatitis, the liver—Splenitis, the spleen—Cystitis, the bladder—Nephritis, the kidney—Dermatitis, the skin—Erysipelas.

III. **DISEASES EVOLVED IN THE PROGRESS OF GROWTH.** Scrofula—Rickets—Kephalosis or morbid head.

IV. **DISEASES ARISING FROM CHANGES IN THE PROCESSES OF NOURISHMENT AND CONSERVATION.** Dyspepsia or indigestion—Bilious and Bowel disorders, many and various—Gout, Gravel—Stone—Diabetes—Chronic Skin diseases.

V. **DISEASES EVOLVED IN THE PROGRESSIVE CHANGES OF THE BODY FROM CAUSES AT PRESENT OBSCURE.** Consumption—Cancer—Carbuncle.

VI. **DISEASES INCIDENT TO AGEING.** Organic degeneracy.

A. Of the brain and nerves. Paralysis—Apoplexy—Amaurosis—Delirium tremens.

B. Of the heart, arteries, and veins. Hypertrophy—Aneurism—Venous congestion—Hæmorrhage.

C. Of the kidneys.

* Brief, but definite and clear descriptions of many species of disease will be included, to enable the general student to recognise and discriminate most cases.

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D. Of the liver.

E. Of the muscles and bones.

VII. DISEASES SECONDARY TO OTHER MORBID STATES. Asthma, Dropsy, Paralysis, Apoplexy.

VIII. DISEASES FROM POISONOUS INFLUENCES FROM WITHOUT, NOT BEING ESSENTIALLY FEVER. Rheumatism, Painter's cholic, Hooping-cough, Certain skin diseases.

IX. MECHANICAL DISEASES,—THE OBJECTS OF SURGERY.

X. DISEASES OF THE MOTORY SYSTEM. SENSES, ANIMAL INSTINCTS, AND MIND. Convulsion, Epilepsy, Insanity.

GENERAL CONSIDERATION UPON DISEASES. Uncertainty of death essential to its moral efficiency as a corrective fear or a judicial punishment—Mode by which this is effected.—No universal law of diseases as respects their endurance, subsidence, or mortality—General laws subject to modification and interferences.

CASES illustrative of, the uncertain termination of diseases.

Diseases under every aspect, utterly irreconcilable with the Deistic hypothesis, but consistent and harmonious with the Christian scheme.

The wisdom, power, and providence, together with the judicial severity of God, displayed in diseases—A moral law necessarily implied in punitive inflictions, a control evident in the limits of diseases—The only explanation to be found in the scriptural doctrine of CHRIST. Moral probation of man after judicial condemnation, and a future state of rewards and punishments.

Hereditary disease illustrative of SIN, derived from a common progenitor, and involving the whole human race.

THE STATISTICS OF DISEASE. Changing rate of human mortality—The average duration of human life at present increasing—Causes of this—Prospects of the science of medicine—Sources whence we may anticipate its improvement—Agents yet untried which from analogy may be expected to influence diseases at present deemed incurable.

Progress and tendency of the Divine plans. Comparison of unfulfilled prophecy, with anticipations derived from the study of nature—Proofs of the truth of Christianity deducible from the progress of medicine.

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MORAL AND SPIRITUAL EFFECTS OF DISEASES. Influence of the peculiarities of bodily constitution upon men's characters—Moral idiosyncracies—Influence of diseases in their apprehension of truth, and upon their moral and religious creed and practices.

Specific effects of certain diseases—Tendency of some to promote dejection, melancholy, fear, timidity; of others, to beget hope, joy, and cheerful anticipations; some, again, excite violence of temper, irascibility, anger; others, humility, weakness, self-distrust—Influence of these bodily tendencies upon the religious character of individuals, and upon the question of "the inward witness"—Inconsistency of the phrenological hypothesis with these facts.

THERAPEUTICS.—The science of remedies and art of healing "Vis mediatrix naturæ," or power of restoration—Discussions concerning this principle—Power of nature to throw off acute diseases, to restore injuries, and compensate for deprivations.

REMEDIAL POWERS AND AGENTS. 1st. Coeval in extent with causes of disease. 2d. Limited in their efficacy by laws. 3d. Distributed throughout nature—Marks of design in the distribution, facilities, and difficulties of access to them. 4th. Their discovery gradual, coincident with the spread of moral influences, and with christian religion particularly.

Properties of remedies, shown to be endowments for the especial purpose of their application to the cure of diseases,—not a result of their cosmical relations.

Principle of cure by revulsion and counter-irritation.—History of certain remarkable remedies—Abstraction of blood—Vaccination—Antimony—Acids—Ammonia—Belladonna—Bismuth—Cantharides—Colchicum—Ergot—Iron—Iodine—Magnesia—Mercury—Opium—Silver—Sulphur—Tobacco.

Success of modern chemistry in extracting the medicinal elements of vegetable matter. Morphia, Quinia, Strychnia, Veratrina, Aconitina, and in the formation of compounds with these and other organic products, for remedial purposes.

Moral obligations to seek for and employ remedies.

The manifestation of the Divine character, and the nature of the Divine government in the endowments of natural bodies, in reference to their employment as remedies.

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Discriminating benevolence—Conditional mercy—Limited exertion of power.

Analogy of nature in remedies with the Gospel plan of salvation—Christ the Healer.

PORTRAITURE OF THE CHRISTIAN PHYSICIAN.

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